Sucrose synthase p Eucalyptus grandis Eucalyptus grandis Plasmodium falcipa

Fibrin gel binding Proteoglycan bindi NCAM/heparin bindi Fibrin gel binding Fen(Y205D) mutant

Castor bean calret Castor bean calret

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MBP-calreticulin; maltose binding protein; angiogenesis; inhibition; endothelial cell; anti-angiogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Inhibiting endothelial cell growth and angiogenesis using calreticulin, useful for suppressing tumor growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Recombinant human calreticulin residues 121-180.
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Pike SE,
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Human MBP-calretic
Flea calreticulin
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Recombinant delta-
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16.025 Million cell updates/sec
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Listing first 45 summaries
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AAW04171
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                                        Contacting the cells with calreticulin (or its fragments). Erugments of calreticulin causes at least 40% inhibition of anglogenesis, tumor growth und/or endothelial cell growth (claimed). The method may be used for inhibiting anglogenesis in a patient. The anglogenesis is associated with a disease other than a tumor that is associated with new accordance of the removation (e.g. diabetic neuropathy, retrolental fibroplasia, truchoma, neovascularization, psoriasis, anglofibromas, immune inflammation, atheroscierosis, excessive wound repair, retinal neovascularization, macular degeneration, corneal graft rejection, contact lens overwear, Crohn's disease, non-immune inflammation, contact lens systemic lupus exythroaditis, contact lens systemic lupus exythroaditis, solecodemic syndrome, sarcoidosis and primary biliary cirrhosis). The method may also used for treating/inhibiting tumor growth especially
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Fragments of calreticulin causes at least 40% inhibition of angiogenesis, tumor growth and/or endothelial cell growth (claimed). The method may be
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                                 novel method of inhibiting endothelial cell growth comprises
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         Claim 4; Page 85; 99pp; English.
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used for inhibiting angiogenesis in a patient. The angiogenesis is associated with a disease other than a tumor that is associated with neovascularization (e.g. diabetic neuropathy, retrolental fibroplasia, trachoma, neovascular glaucoma, psoriasis, angiofibromas, immune inflammation, atherosclerosis, excessive wound repair, retinal neovascularization, macular degeneration, corneal graft rejection, contact lens overwear, Crohn's disease, non-immune inflammation, rheumatoid arthritis, systemic lupus erythromatosus, thyroiditis, Goodpasture's syndrome, systemic vasculitis, scleroderma, Sjorgen's syndrome, sarcoldosis and primary billary cirrhosis). The method may also be used for treating/inhibiting tumor growth especially
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Kaposi's sarcoma (claimed).
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A novel method of inhibiting endothelial cell growth comprises

C contacting the calls with calreticulin (or its fragments/variants).

Fragments of calreticulin causes at least 40% inhibition of angiogenesis, tumor growth and/or endothelial cell growth (claimed). The angiogenesis, tumor growth and/or endothelial cell growth (claimed). The canglogenesis is associated with a disease other than a tumor that is associated with neovascularization (e.g. diabetic neuropathy, retrolental clibroplasia, trachoma, neovascular glaucoma, psoriasis, angiofibromas, immunue inflammation, atheroscolerosis, excessive wound repair, retinal covascularization, macular degeneration, corneal graft rejection, contact lens overwear, Crohn's disease, non-immune inflammation, contact lens overwear, crohn's disease, non-immune inflammation, contact lens systemic lupus erythromatosus, thyroiditis, contact lens systemic lupus erythromatosus, thyroiditis, condopasture's syndrome, systemic vasculitis, scleroderma, Sjorgen's syndrome, sarcoidosis and primary bliliary cirrhosis). The method may also be used for treating/inhibiting tumor growth especially
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contact lens overwear, Crohn's disease, non-immune inflammation, rheumatoid arthritis, systemic lupus erythromatosus, thyroiditis, Goodpasture's syndrome, systemic vasculitis, scleroderma, Sjorgen's syndrome, sarcoidosis and primary biliary cirrhosis). The method may also be used for treating/inhibiting tumor growth especially Kaposi's sarcoma (claimed).
                                                                                                                                                              Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    06-OCT-1998;
                                                                                                                                                                                                                                                                                                                                       10-AUG-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          useful for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Synthetic.
                                                                                                                                                                                                                                                                                                              AAY92355;
                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ношо
                                                                                                                                                                                                                                                                     AAY92355
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Recombinant human MBP-calreticulin comprises the sequence of human calreticulin (see AAY92349) without the 17 N-terminal amino acids.

A novel method of inhibiting endothelial cell growth comprises contacting the cells with calreticulin (or its fragments/variants).

Fragments of calreticulin causes at least 40% inhibition of anglogenesis, tumor growth and/or endothelial cell growth (claimed). The method may be used for inhibiting anglogenesis in a patient. The anglogenesis is associated with a disease other than a tumor that is associated with necvascular jalucoma, psoriasis, anglofibromas, immune inflammation, atherosclerosis, excessive wound repair, retinal neovascularization (anglogenesis) anglofibromas, immune inflammation, atherosclerosis, excessive wound repair, retinal neovascularization acuallar degeneration, corneal graft rejection, contact lens overwear, Crohn's disease, non-immune inflammation, chematoid arthitis, systemic lupus erythromatosus, thyroiditis,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               retrolental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            endothelial cell; anti-angiogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Inhibiting endothelial cell growth and angiogenesis using calreticulin, useful for suppressing tumor growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Goodpasture's syndrome, systemic vasculitis, scleroderma, Sjorgen's syndrome, sarcoidosis and primary biliary cirrhosis). The method may also be used for treating/inhibiting tumor growth especially
                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MBP-calreticulin; maltose binding protein; angiogenesis; inhibition;
                                                                                                                                                                  ;
                                                                                            Length 280;
                                                                                                                                                                  Indels
                                    100.0%; Score 96; DB 21; I
100.0%; Pred. No. 1.1e-08;
0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Recombinant human MBP-calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAY92350 standard; Protein; 400 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 4; Page 80-81; 99pp; English.
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                                                                                                                                                                                                                                        1 VIENYKGKNVLINKDIRC 18
                                                                                                                                                                                                                                                                            10-AUG-2000 (first entry)
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                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pike SE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2000-303767/26
                                                                                               Query Match
Best Local Similarity
280 AA;
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Calreticulin,
                                                        22-MAR-1989;
                                                                        22-MAR-1988;
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                                                                                                                                                                                                                                                                                                                                                                                 28-MAY-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Schwaeble W;
                         WO8909273-A
                                         05-OCT-1989
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          Synthetic.
                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                  AAY00927;
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                                                                                                                                                                                                                                                                                                                                                       The present sequence is calreticulin. It and a C-domain derived peptide (AAM06736) are useful for treating a patient to inhibit restenosis. The calreticulin-type opds. are administered either parenterally, intravenously or via a catheter and can target areas of vascular damage to inhibit or prevent restenosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                 Gaps
                                                                                                                                                                                                                                                                                                         Inhibition of restenosis in patients - using calreticulin or a C-domain polypeptide of calreticulin or a variant with the same
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0
                                                                                                                                                                                                                                                                                                                                                                                                                                Length 401;
 Length 400;
               Indels
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Score 96; DB 21;
Pred. No. 1.7e-08;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                               Score 96; DB 18;
Pred. No. 1.7e-08;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sjorena ayndrome; systemic lupus erythematosus.
                                                                                                                                                    calreticulin; C-domain; restenosis; inhibitor.
                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                     AAW11156 standard; peptide; 401 AA.
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                                                                                                                                                                                                                                                                                                                                         Disclosure; Fig 1; 48pp; English.
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100.0%;
100.0%;
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ID AAP92276 standard; protein; 41
ID AAP92276 standard; protein; 41
AC AAP92276;
XX
XX
IDT 23-FEB-1990 (first entry)
XX
IDK 60 kD ko (RO/SSA) antigen.
XX
KW Sjorenw wyndrome; systemic lup
                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%;
llarity 100.0%;
Conservative 0;
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                                        96US-0649417
95US-0442844
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                                                                                                                    (first entry)
      Local Similarity 100.
                                                                                                                                                                                                                                                         (UYAL-) UNIV ALBERTA.
                                                                                                                                                                                                                                                                          Michalak M;
                                                                                                                                                                                                                                                                                         WPI; 1997-012036/01.
                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
Matches 18; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                       401 AA;
                                                                                                                                                                                   WO9636643-A1.
                                                                                                                                    Calreticulin.
                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                   17-MAY-1996;
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17-MAY-1995;
                                                                                                                    31-MAY-1997
                                                                                                                                                                                                   21-NOV-1996
                                                                                                                                                                                                                                                                           Lucan A,
                                                                                                     AAW11156;
                                                                                                                                                                                                                                                                                                                          activity.
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Query Match
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        Rest Loca
Mutches
                                                                            AAW11156
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Clq and collectin receptor; cClqR binding domain; complement ubiquitin; CUB functionality; inhibitor; complement activation; inflammation; myocardial infarction, brain ischaemia; gut ischaemia; amyloid plaque; rheumatoid arthritis; systemic lupus erythematosus; Alzheimer's disease; immune complex nephritis; therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic peptides corresp. to an epitopic core of Ro antigen are expressed recombinantly to detect autoantibodies, for identification of autoimmune diseases. These epitopes are AAs 24-36, 23-36, 188-209, or 241-255. The peptides may be substd. for ribonucleoprotein particle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                       DNA sequences encoding antigenic epitope(s) of Ro 60 kD autoantigen - used in immunoassays to detect rheumatic disease
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 417;
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100.0%; Pred. No. 1.8e-08;
iive 0; Mismatches 0;
                                                                                                                                                                  McCauliffe DP:
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89WO-US01213.
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                                                    88US-0171634
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                                                                                                     (TEXA ) UNIV OF TEXAS SYST
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                  Sontheimer RD, Capra JD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
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Best Local Similarity
Matches 18; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               417 AA;
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AAW04171;
                                                                                                                                                                                       Sequence
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                                                                                                                                                                                                                                                                                                                  RESULT 10
                                                                                                                                                                                                                                                                                                                         AAW04171
  οy
                                                                                                                                                                                                                                                                                 Ωp
                                                                                                                                                                                                                                                                                                                                                This sequence is calreticulin, a homologue of Clq and collectin receptor (CC1qR). The invention relates to the use of a cC1qR binding domain in a medicament to effect complement ubiquitin (CUB) functionality, and an inhibitor of the cC1qR binding domain in a medicament to inhibit cub functionality. The cC1qR binding domain, or its inhibitor, can be used to treat a human or animal body. Particularly an inhibitor, can be used to complement activation involved in the initiation and maintenance of inflammation, for example in myocardial infarction, brain ischaemia (stroke), gut ischaemia, rheumatoid arthritis, systemic lupus exthematosus, burns, immune complex nephritis, and to treat amyloid plaques in Alzheimer's disease. The use of cC1qR binding domain or inhibitor enables the CUB domain functionality to be modulated using a
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                                                                                                                                                                                                                                                                                                                                                                                                                                MBP-calreticulin; maltose binding protein; angiogenesis; inhibition; endochellal cell; anti-angiogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Inhibiting endothelial cell growth and angiogenesis using calreticulin,
                                                                                                                                                                                                                                                     Gaps
Use of a cClqR binding domain - to modulate complement ubiquitin
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                                                                                                                                                                                                                               Length 417;
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                                                                                                                                                                                                                               Score 96; DB 20;
Pred. No. 1.8e-08;
                                                                                                                                                                                                                                                    Mismatches
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/label= signal_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18
/label= mature_protein
                              Disclosure: Page 26-27; 31pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           useful for suppressing tumor growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                              AAY92349 standard; Protein; 417 AA
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                                                                                                                                                                                                                               100.0%;
100.0%;
                                                                                                                                                                             low molecular weight molecule
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                                                                                                                                                                                                                                                                        1 VIFNYKGKNVLINKDIRC 18
                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                             Human MBP-calreticulin.
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           (CUB) functionality.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000-303767/26
                                                                                                                                                                                                                              Query Match
Best Local Similarity
Matches 18; Conserv
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                                                                                                                                                                                                417
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               05-OCT-1999;
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                                                                                                                                                                                                 Seguence
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contacting the cells with calreticulin (or its fragments/variants).

Fragments of calreticulin causes at least 40% inhibition of angiogenesis, tumor growth and/or endothelial cell growth (claimed). The method may be used for inhibiting angiogenesis in a patient. The angiogenesis is associated with a disease other than a tumor that is associated with neovascularization (e.g. diabetic neuropathy, retrolental fibroplasia, trachoma, neovascular glaucoma, psoriasis, angiofibromas, immune inflammation, atherosclerosis, excessive wound repair, retinal neovascularization, mecular degeneration, corneal graft rejection, contact lens overwear, Crohn's disease, non-immune inflammation, rheumatoid arthritis, systemic lupus erythromatosus, thyroiditis, Goodpasture's syndrome, systemic lupus erythromatosus, thyroiditis, condornen, sarcoidosis and primary biliary cirrhosis). The method may also be used for treating/inhibiting tumor growth especially Kaposi's sarcoma (claimed).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Haematophagous insect calreticulin protein - used to reduce insect infestation and desensitise patients to allergic dermatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Calreticulin; flea; haematophagous insect; allergic dermatitis; vaccine; therapy; PCtCal403.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%; Score 96; DB 21;
100.0%; Pred. No. 1.8e-08;
tive 0; Mismatches 0;
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Matches 18; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          417 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N-PSDB; AAT39516;
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Region
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Contacting the cells with calreticulin (or its fragments/variants). Fragments of calreticulin causes at least 40% inhibition of angiogenesis, tumor growth and/or endothelial cell growth (claimed). The method may be used for inhibiting angiogenesis in a patient. The angiogenesis is ussociated with a disease other than a tumor that is associated with neovascularization (e.g. diabetic neuropathy, retrolental fibroplasis, trachom, neovascular glaucoma, psoriasis, andiofibromas, immune inflammation, atherosclerosis, excessive wound repair, retinal neovascularization, macular degeneration, conneal graft rejection, contact lens overwear, Crohn's disease, non-immune inflammation, rheumatchid arthritis, systemic lupus erythromatosus, thyroiditis, Gowdpusture's syndrome, systemic lusus erythromatosus, thyroiditis, syndrome, spatemic vasculitis, scleroderma Sjorgen's also be used for treating/inhibiting tumor growth especially
                                                                                                                                                                                                                                                                                                                              MAP-culreticulin, maltose binding protein; anglogenesis; inhibition; cyndorheilal cell; anti-anglogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-artherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Inhibiting endothelial cell growth and angiogenesis using calreticulin, useful for suppressing tumor growth
                                                                                                                                 Gaps
animal to reduce infestation. It reduces calreticulin activity in insects, so reducing the insect burden on an animal. Calreticulin can be used to elicit an immune response, thereby desensitising an animal to allergic dermatitis caused by fleas, mosquitoes or
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A novel method of inhibiting endothelial cell growth comprises
                                                                                                          Length 403;
                                                                                          94.8%; Score 91; DB 17; Length 40
94.4%; Pred. No. 1.26-07;
                                                                                                                                                                                                                                                                                                          Recombinant human calreticulin residues 132-180,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (USSH ) US DEPT HEALTH & HUMAN SERVICES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 4; Page 82-83; 99pp; English
                                                                                                                                                                                                                                       ¥
                                                                                                                                                                                                                                     AAY92353 standard; Protein; 49
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                                                                                                                                                                  Yao L;
                                                                                                                                                     1 VIFNYKGKNVLINKDIRC 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Kaposi's sarcoma (cluimed)
                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                  Local Similarity 94.4 nes 17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pike SE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2000-303767/26
                                                                      403 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             49 AA;
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                                                                                                                                                                                                                                                                                                                                                                                         Homo napiens
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                                                                                                                                                                                                                                                                                   10-AUG-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                 13-APR-2000.
                                               Cultcoides.
                                                                                                                                                                                                                                                                                                                                                                                                    Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tosato G,
                                                                       Sedneuce
                                                                                                                                                                                                                                                            AAY92353;
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                                                                                                         Query Match
                                                                                                                   Bont Loca
                                                                                                                                                                                                                        AAY92353
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The sequence was deduced from a cDNA clone lambda RAL-1 prepd. from RAM isolated from nodules excised from patients infected with O. volvulus. The N-terminal is incomplete, however Abs which specifically bind to protein prepd. from induced cultures of lambda RAL-1 lysogens recognise a single polypeptide of mol. wt. 42.000 in extracts of adult worms. Analysis deduced sequence suggests that it encodes a protein of mol. wt. 39.130. If the antigen is not subject to post-translational processing this suggests that most of the coding sequence is present. The three repeats are highly hydrophilic regions likely to be exposed on the surface of the antigen and highly immunogenic. Recombinant antiginal and highly immunogenic. Recombinant can be used stimulate T-cells of individuals infected by the parasite to proliferate and may be used as the basis for a vaccine against Onchocerciasis or river
                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA encoding Onchocerca volvulos antigen – used to express recombinant antigen for vaccine against onchocerciasis or river
                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         River blindness; onchocerciasis; vaccine; antigen; parasite.
      Length 49;
                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Partial sequence of Onchocera volvulus 42 kD antigen.
85.4%; Score 82; DB 21; 1
100.0%; Pred. No. 3.7e-07;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    160.166
/label= repeat unit
/note= "hydrophilic"
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/label= repeat unit
/note= "hydrophilic"
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//label- repeat unit
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                                                                                                                                                                                                                                                                                                                                 AAR12312 standard; Protein; 336 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                   29-AUG-1991 (first entry)
                                                             Conservative
                                                                                                                     4 NYKGKNVLINKDIRC 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Greene BM, Unnasch TR;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Onchocerca volvulus
                        Best Local Similarity
Matches 15; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N-PSDB; AAQ11987
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           blindness
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Query Match
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us-09-828-000-6.rag

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Blaschuk OW,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAY21879;
                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                        subject
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This sequence represents the human neural cell adhesion molecule (NCAM) amino acid sequence. NCAM is found in three forms, two of which are transmembrane forms, while the third is attached via a lipid anchor to the cell membrane. All three NCAM forms have an extracellular structure consisting five immunoglobulin domains (Ig domains). The Ig domains are numbered 1 to 5 from the N-terminal. The invention relates to a compound bluds to NCAM-IgJ/Ig2 domains, and is capable of stimulating or promoting neurite outgrowth from NCAM presenting cells, and is also capable of promoting the proliferation of NCAM presenting cells. The compound may be used in the treatment of normal, degenerated or damaged NCAM presenting cells. The compound may lead to the compound may in particular be used to treat diseases of the
                                                                                                                                                                                                                                                                                                                   NCAM; neural cell adhesion molecule; Igl; immunoglobulin domain 1; neurite outgrowth promoter; proliferation; nerve damage; sclerosis; impaired myellnation; stroke; Parkinson's disease; memory; schizophrenia; Alzheimer's disease; diabetes mellitus; circadian clock; nephrosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Compositions that bind neural cell adhesion molecules useful for treating disorders of the nervous system and muscles e.g. Alzheimer's and Parkinson's diseases -
                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Jensen PH;
                                                                     ;
                                                                                                                                                                                                                                                                                                                                                                                treatment; prosthetic nerve guide; treatment; nervous system
                                           Length 336;
                                                                     3; Indels
                                                                                                                                                                                                                                                                                        Human NCAM 140kD isoform precursor amino acid sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ostergaard S,
                                        Score 66; DB 12;
Pred. No. 0.0023;
3; Mismatches 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Holm A, Olsen M, Osterg
V, Ralets I, Berezin V;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure; Fig 17; 119pp; English.
                                                                                                                                                                                                   AAY88565 standard; protein; 848 AA.
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92 vifhykdrnhmikkdirc 109
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99DK-0000592
                                                                                               1 VIFNYKGKNVLINKDIRC 18
                                                                                                                                                                                                                                                           (first entry)
                                        Query Match , 68.8
Best Local Similarity 66.7
Matches 12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OLSEN M.
OSTERGAARD S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RONN L C B.
BOCK E.
HOLM A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            POULSEN F M.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JENSEN P H
336 AA;
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RALETS I.
BEREZIN V.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ы
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                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200018801-A2
                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                             07 - AUG - 2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29-SEP-1998;
29-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  06-APR-2000
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   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (HOLM/) (OLSE/) (OSTE/)
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(BERE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (POUL/)
(SORO/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RONN/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (JENS/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BOCK/)
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                  damage, traumatic nerve damage, impaired myelination of nerve fibres, conditions resulting from a stroke, Parkinson's disease, Alzheimer's conditions resulting from a stroke, Parkinson's disease, Alzheimer's disease, dementiats, sclerosis, nerve degeneration associated with elections affecting the circadian clock or neuro-muscles mellitus, disorders affecting the circadian clock or neuro-mascles mellitus, disorders affecting the circadian clock or neuro-mascles may also be treated with the compound, such as conditions associated with impaired function of neuromuscular connections (e.g. genetic or traumatic shock or traumatic atrophic muscle disorders). Conditions of the gonads, pancreas (e.g. diabetes mellitus types I and II), kidney (e.g. nephrosis), heart, liver and bowel may also be treated using the compound. The compound is used in a prosthetic nerve guide, and also to stimulate the ability to learn, and to stimulate the memory of a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
central and peripheral nervous systems such as post operative nerve
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Peptide Seg ID No: 63 of W09933875.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAY21879 standard; peptide; 17 AA.
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149 liwkhkgrdvilkkdvr 165
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
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Best Local Similarity
T; Conserve
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The invention relates to methods using cadherin modulating agents, particularly paptides containing the sequence HAV or antibodies, for enhancing or inhibiting cadherin-mediated cell adhesion. The methods can be used to treat diseases or other conditions characterized by undestruble cell adhesion or to facilitate drug delivery to a specific tissue or tumnour (such as bladder tumnours, ovarian tumnours or melanomas). They can also be used to enhance cell adhesion (e.g. supplement or replace stitches or to facilitate wound healing). They can also be used for enhancing and/or directing neurite outgrowth. The methods can also be used for tenating damyelinating neurite outgrowth. The methods can also be used for treating damyelinating neurite outgrowth. The methods can also be used for enhancing damyelinating neurological disease, e.g. multiple electrosis. The methods can also be used for e.g. enhancing drug delivery, treating cancers (such as carcinomas, leukenia or melanomas), inhibiting andogenesis, encoderin expressing cells, e.g. for treating andogenesis in cadherin-expressing cells, e.g. for treating cancers (such a treating adhesion of foreign tissue implanted in a mammal, interest or theumatoid arthritis, modulating the immune system, for preventing preventing preventing spinal cord injuries or inhibiting synaptic stability, treating spinal cord
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tissue or tumour. Alternatively the agents may be used to enhance cell adhesion (e.g. to supplement or replace stitches or to facilitate wound healing) or to enhance or direct neurite outgrowth.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cadherin; modulating agent; cadherin-mediated cell adhesion; cancer; drug delivery; bladder timour; ovarian tumour; melanoma; cell adhesion; wound healing; neurite outgrowth; demyelinating neurological disease; multiple sclerosis; carcinoma; leukemia; melanoma; unglogenesis; CAR; apoptosis; diabetes; rheumatoid arthritis; immune system; pregnancy; vusopermeability; spinal cord injury; synaptic stability.
                                                                                                                                                                                                 Gaps
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                                                                                                                                                 Score 48; DB 20; Length 17;
Pred. No. 0.087;
7; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cell adhesion recognition (CAR) sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Disclosure; Page 34; 148pp; English.
                                                                                                                                                                                                                                                                                                                                                                                           AAY09101 standard; peptide; 17 AA.
                                                                                                                                                 Ouery Match 50.0%;
Best Local Similarity 43.8%;
Matches 7; Conservative
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| iwkhkgrdvilkkdvr 16
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Query Match
Best Local Similarity 43.8%; Pred. No. 0.087;
Matches 7; Conservative 7; Mismatches 2; Indels 0; Gaps 0;
Qy 2 IFNYKGKNVLINKDIR 17
| : : | | : : | | : | | : |
Db 1 iwkhkgrdvilkkdvr 16

Search completed: January 9, 2002, 15:01:13
Job time: 159 sec
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GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd.
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OM protein - protein search, using sw model

January 9, 2002, 15:01:18; Search time 25.18 Seconds (without alignments) 262.100 Million cell updates/sec Run on:

Title: Perfect score: Sequence:

US-09-828-000-3 971 1 EPAVYFKEQFLDGDGWTSRW......PDNTYEVKIDNSQVESGSLE 180

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

100059 segs, 36664827 residues Searched:

100059 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

SwissProt_39:* Database : Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description	P27797 homo sa	rattu	P15253 oryctolagus		_	P29413 drosophila	P11012 onchocerca	P27798 caenorhabdi			beta vu		Q9xf98 prunus arme			Q40401 nicotiana p				Q9zppl berberis st	Q06814 schistosoma		004153 arabidopsis	P28491 sus scrofa	P35564 mus musculu	5 rattu	P24643 canis famil	P27824 homo sapien	Snm	O14967 homo sapien	6581	P34652 caenorhabdi	P29402 arabidopsis
SUMMARIES	ID	CRTC_HUMAN	CRTC_RAT	CRTC_RABIT	CRT1_BOVIN	CRTC_MOUSE	CRTC_DROME	RAL1_ONCVO	CRTC_CAEEL	CRTC_DICDI	CRTC_EUGGR	CRTC_BETVU	CRTC_RICCO	CRIC_PRUAR	CRTC_ORYSA	CRT2_BOVIN	CRTC_NICPL	CRT2_ARATH	CRTC_CHLRE	CRT1_ARATH	CRTC_BERST	CRTC_SCHMA	CRTC_MAIZE	CRT3_ARATH	CRTC_PIG	CALX_MOUSE	CALX_RAT	CALX_CANFA	CALX_HUMAN	CALG_MOUSE	CALG_HUMAN	CALX_SCHPO	CALX_CAEEL	CAX1_ARATH
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CALX_SOYBN	CALX_HELTU	CALX_PEA	CAX2_ARATH	CALX_YEAST	CRTC_CANFA	EFTU_MESVI	MTA1_ACICA	PRO1_LISMO	ABIC_LACLA	HXA2_HAEIN	AMIA_STRPN	0
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232	215.5	215.5	202.5	133.5	86	81	80.5	79.5	78.5	78	77.5	
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ALIGNMENTS

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RP RA RT RT	SEQUENCE OF 18-32. MEDLINE-90380058; PubMed-2400400; Krause K.H., Simmerman H.K.B., Jones L.R., Campbell K.P.; "Sequence similarity of calreticulin with a Ca2(+)-binding that co-purifies with an Ins(1,4,5)P3-sensitive Ca2+ store	18-32 10058; F Simmer milarit fies wi	ubMed=2 man H.K y of ca	400400; (.B., Johnsticu lreticu ns(1,4,	nes I lin w 5)P3-	rith sens	Campbel a Ca2(+) itive Ca	1 K.P. -bindi 2+ stc	protein in HL-60	0

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                                                                                                                                                                                                                                                                                                                           "Microsequences of 145 proteins recorded in the two-dimensional gel protein database of normal human epidermal keratinocytes."; Electrophoresis 13:960-969(1992).
                                                                                  Hochstrasser D.F., Frutiger S., Paquet N., Bairoch A., Ravier F., Pasquall C., Sanchez J.-C., Tissot J.-D., Bjellqvist B., Vargas R., Appel R.D., Hughes G.J.;
"Human liver protein map: a reference database established by microwequencing and gel comparison.";
Electrophoresis 13:992-1001(1992).
                                                                                                                                                                                                                                Rasmussen H.H., van Damme J., Puype M., Gesser B., Cells J.E.,
Vandekerckhove J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; Extrarget.
Pfam; PF00262; calreticulin; 1.
PRINTS; PR00626; Calreticulin; 1.
ProDom; PB001866; Calreticulin; 1.
PROSITE; PS000014; Extrarget; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_1; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_1; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
                                                                                                                                                                                     PARTIAL SEQUENCE OF 25-34; 56-62; 208-221 AND 273-278
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P-DOMAIN.
C-DOMAIN.
4 X APPROXIMATE REPEATS.
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                                                                    MEDLINE-93162045; PubMed 1286669;
                                                                                                                                                                                                  TISSUR-Keratinocytes;
MEDLINE-93162043; Pubmed-1286667;
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FIR; A37047; A37047;
PIR; S11475; S11475;
PIR; A44530; A45330.
PIR; A44652; A46452.
SWISS-2DPAGE; P27797; HUWAN.
AAFNUA/GAORT-2DPAGE; 9401; IEF.
MS: 109091;
             Lochem. J. 270:545-548(1990).
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                                         SEQUENCE OF 18-28.
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                                                        TISSUE-Liver
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Sclurognathi; Muridae; Murinae; Rattus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nakamura M., Moriya M., Baba T., Michikawa Y., Yamanobe T., Arai K., Oktnaga S., Kobayashi T.;
"An endoplasmic reticulum protein, calreticulin, is transported into the acrosome of rat sperm";
the acrosome of rat sperm";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      P18418; P10452;
01-MAR-1989 (Rel. 10, Created)
01-NOV-1990 (Rel. 16, Last sequence update)
01-NOV-1997 (Rel. 35, Last annotation update)
CALRETICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP) (ERP60) (CALBP)
(CALCIUM-BINDING PROTEIN 3) (CABP3).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Holmes C., Patel Y.C.; "Structural homology between the rat calreticulin gene product and the Onchocerca volvulus antigen Ral-1."; Nucleic Acids Res. 18:4933-4933(1990).
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STRAIN-SPRAGUE-DAWLEY, TISSUE-Brain cortex;
MEDLINE-90370496; PubMed=2395661;
MUTCHY K.K., Banville D., Srikant C.B., Carrier F., Bell A.,
Holmes C., Patel Y.C.;
                                                                                                                                                                                     Length 417;
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MEDLINE-95181573; PubMed-7876339;
Scennichsen B., Fuellekrug J., van Nguyen P., Diekmann W.,
                                                                                                                                                                                                                 Indels
                                                                                       BY SIMILARITY.
PREVENT SECRETION FROM ER.
                                                                                                                     MISSING (IN REF. 3).
BC37C3C0F1054FB2 CRC64;
            3 X APPROXIMATE REPEATS.
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2-2.
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                                                                                                                                                                                  Score 971; DB 1;
Pred. No. 4.8e-80;
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ASP/GLU/LYS-RICH.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                             416 AA
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100.0%; Pre
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MEDLINE 93202172; PubMed 8453984;
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48141 MW;
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Mammalla; Eutheria; Rodentia;
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01-APR-1990
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P15253;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Identification of protein disulfide isomerase and calreticulin as autofimmune antiques in LEC strain of rates.";
Bicohim. Biophys. Acta 1158:339-344(1993).
-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM BINDING SITES.
-!- SUBGRILLIAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SUBGRILLIAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SIMILARITY: BELONGS TO THE CALREFICULIN FAMILY.
-!- CAUTION: MAS ORIGINALLY (REE. 2) THOUGHT TO BE D-BETA-HYDROXYBUTYRATE DEHYDROGENASE.
                                                                           MEDLINE-91054414; PubMed-2241926; Arvers S., de Mattei M., Lanfredi M., Villa A., Green N.M., Maclennan D.H., Meddolesi J., Pozzan T.; "Calreticulin is a candidate for a calsequestrin-like function in
                                                                                                                                                          Ca2(+)-storage compartments (calciosomes) of liver and brain."; Blochem. J. 271:473-480(1990).
                                                                                                                                                                                                                                                               MEDLINE-92360010; PubMed-1497655; Nakamura M., Michikawa Y., Baba T., Okinaga S., Arai K.; "Calreticulin is present in the acrosome of spermatids of rat testis.";
                                                                                                                                                                                                                                                                                                                                                                                                                                Yokoi T., Nagayama S., Kajiwara R., Kawaguchi Y., Horiuchi
Kamataki T.;
Lone Y.C., Bailly A., Latruffe N.;
Submitted (DEC-1988) to the EMBL/GenBank/DDBJ databases.
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4 X APPROXIMATE REPEATS.
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R Pfam; PF00562; calreticulin; 1.

R PRINTS; PR00626; CALRETICULIN.

R PROSTE; PS00014; ER_TARGET; 1.

R PROSTE; PS00804; CALRETICULIN_1; 1.

PROSTE; PS00804; CALRETICULIN_2; 1.

PROSTE; PS00804; CALRETICULIN_2; 1.

R PROSTE; PS00805; CALRETICULIN_2; 1.

R PROSTE; PS00805; CALRETICULIN_2; 1.

R GARETICULIN_2; 1.

SIGNAL 17

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P-DOMAIN.
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EMBL; X13702; CAA31987.1; ALT_SEQ.
EMBL; X79327; CAA55890.1; -.
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InterPro; IPR000886; ER_target.
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PIR; SO4867; S04867
PIR; S13055; S1305
PIR; S13045; S13045.
PIR; S49176
PIR; S45036; S45036
PIR; JH0819; JH0819.
                                                     SEQUENCE OF 18-29.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TISSUB-SLOW-twitch skeletal muscle;
MEDLINE=90094320; PubMed=2600080;
Fliegel L., Burns K., Maclennan D.H., Reithmeier R.A.F., Michalak M.;
"Molecular cloning of the high affinity calcium-binding protein (calreticulin) of skeletal muscle sarcoplasmic reticulum.";
J. Biol. Chem. 264:21522-21528(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                            GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GPGTKKVHVIPNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 197
                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                               1 EPAVYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Oryctolagus cuniculus (Rabbit).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.
NCBI_TaxID=9986;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-APR-1990 (Rel. 14, Last sequence update)
01-OCT-1996 (Rel. 34, Last annotation update)
CALRETICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP) (ERP60).
                                                                                                                                                                                                                                        Score 933; DB 1; Length 416;
pred. No. 1.2e-76;
5; Mismatches 5; Indels
                                                                                                                                              PREVENT SECRETION FROM ER 2E6713CED31A2970 CRC64;
3 X APPROXIMATE REPEATS. 2-1.
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Biochem. Biophys. Res. Commun. 177:979-984(1991)
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ASP/GLU/LYS-RICH.
BY SIMILARITY.
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MEDLINE=91054414; PubMed=2241926;
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MEDLINE=91282795; PubMed=2059224;
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                                                                                                                                                                                                                                                96.18;
94.48;
                                                                                                                                                                       47995
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Best Local Similarity 94.4
Matches 170; Conservative
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  297
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416 AA;
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STANDARD;

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GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                        138 GPGTKKVHVIENYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 197
                                                                                                                               01-OCT-1996 (Rel. 34, Last sequence update)
01-OCT-1996 (Rel. 34, Last annotation update)
CALRETICULIN, BRAIN ISOFORM 1 (CRP55) (CALREGULIN) (HACBP).
Bos taurus (Bovine).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Cetartlodactyla; Ruminantia; Pecora; Bovoidea;
                                                                                                                   01-0CT-1996 (Rel. 34, Created)
01-0CT-1996 (Rel. 34, Last seq
01-0CT-1996 (Rel. 34, Last ann
                                                                                                                                                                                                       Bovidae; Bovinae; Bos
                                                                                                                                                                                                                 NCBI_TaxID~9913;
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P52193;
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CRT1_BOVIN
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                                                                                                         This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Blainformatics and the EMBL outstation the European Bioinformatics institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (see http://www.isb-sib.ch/announce/or send an email to license@iBb-sib.ch).
                     TISSUE Lung;
MEDLINE+92002038; PubMed 1911780;
MEDLINE+92002038; PubMed 1911780;
Guan S., Fallck A.M., Williams D.E., Cashman J.R.;
"Evidence for complex formation between rabbit lung flavin-containing monocxygenase and calreticulin.";
monocxygenase and calreticulin.";
Hiochemistry 30:9892-9900(1991).
                                                                                          -i- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM-BINDING SITES.
-i- SUBBNIT: MONOMER (BY SIMILARITY).
-i- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 418;
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Pred. No. 1.9e-76;
1; Mismatches 7; Indels
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BY SIMILARITY.
PREVENT SECRETION FROM ER.
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                                                                                                                                          "! SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
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Pfam; PF00262; calreticulin; 1.
PR00505; CALRETICULIN.
PROSTER; PS00014; ER_TARGET; 1.
PROSITE; PS00014; ER_TARGET; 1.
PROSITE; PS00804; CALRETICULIN.
PROSITE; PS00804; CALRETICULIN. 2; 1.
PROSITE; PS00805; CALRETICULIN. 2; 1.
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P-DOMAIN.
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PIR, P33208, E33208.
PIR, P33208, F33208.
PIR, S13046, S13046.
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PIR; C33208; C33208
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            PARTIAL SEQUENCE.
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SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
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PREVENT SECRETION FROM ER (POTENTIAL).
7D4B68DFC689EEFI CRC64;
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Pred. No. 2.2e-76;
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Best Local Similarity 95.6 Mutches 172; Conservative

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DISULFID
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CRTC_DROME
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121 GPGTKKVHVIENYKGKNVLINKDIRCKDDEFTHLYTLIVRPNNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE-93013037; PubMed-1398135;
Mazzarella R.A., Gold P., Cunningham M., Green M.;
"Determination of the sequence of an expressible cDNA clone encoding
ERp60/calregulin by the use of a novel nested set method.";
Gene 120:217-225(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A., AND SEQUENCE OF 18-48 AND 129-161.
STRAIN-BALB/C; TISSUE-Liver;
MEDLINE-90059955; PubMed-2583110;
Smith M.J., Koch G.L.E.,
"Multiple zones in the sequence of calreticulin (CRP55, calregulin, HACBP), a major calcium binding ER/SR protein.";
EMBO J. 8:3581-3586(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE-95009907: PubMed-7523108;
Merrick B.A., Patterson R.M., Wichter L.L., He C., Selkirk J.K.;
"Separation and sequencing of familiar and novel murine proteins using preparative two-dimensional gel electrophoresis.";
Electrophoresis 15:735-745(1994).
-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCLUM-BINDING SITES.
-!- SUBGURIT: MONOMER (BY SIMILARITY).
-!- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SIMILARITY: BELONGS TO THE CALREFICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                 01-JAN-1990 (Rel. 13, Created)
01-JAN-1990 (Rel. 13, Last sequence update)
15-DEC-1998 (Rel. 37, Last annotation update)
CALRETICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP) (ERP60)
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REMBL; M92988; AAA37569.1; -
REMBL; M92988; AAA37569.1; -
REMBC; A01744; 201763.
REMS-20PAGE; P14211; MOUSE.
RMCD; MGI:88252; Calr.
RMCD; MGI:88252; Calr.
RMCD; MGI:88252; Calr.
RMCD; RGI:88252; Calr.
RMCDG; PRO0866; Calreticulin; 1.
RMCSITE; PS000014; ER_TARGET; 1.
RMCSITE; PS000014; ER_TARGET; 1.
RMCSITE; PS000014; ER_TARGET; 1.
RMCSITE; PS000014; ER_TARGET; 1.
RMCSITE; PS000014; CALRETICULIN_1; 1.
RMCSITE; RS00005; CALRETICULIN_2; 1.
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N-DOMAIN.
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                                                                                                                                                        STANDARD;
                                                                                                                                                                                                                                                                                                                                    Mus musculus (Mouse).
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                                                                                                                                                CRTC_MOUSE
P14211;
                                                                                                     CRTC_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DOMAIN
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Adams M.D., Celliker S.E., Holf R.A., Evans C.A., Gocayne J.D.,
Amanatides P.G., Scherer S.E., His P.W., Hoskins R.A., Galle R.F.,
George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
Sutton G.G., Wortman J.K., Yandall M.D., Zhang Q., Chen L.X.,
Brandon R.C., Rogers Y.-H.C., Blazej R.G., Champe M., Pfeiffer B.D.,
A Man K.H., Doyle C., Baxter E.G., Hell G., Melson C.R., Miklos G.L.G.,
A Abril J.F., Agbayani A., An H.-J., Andrews-Pfannkoch C., Baddwin D.,
Ballew R.M., Basu A., Berman B.P., Bhandari D., Botshakov S.,
Borkova D., Botchan M.R., Bouck J., Brockstein P., Brottier P.,
Burtis K.C., Busam D.A., Butler H., Cadieu E., Center A., Chandra I.,
Cherry J.M., Cawley S., Dallke C., Davenport L.B., Davies P.,
A de Pablos B., Delcher A., Deng Z., Mays A.D., Dew I., Dietz S.M.,
A bodson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Drosophila melanogaster (Fruit fly).
Eukaryota; Metazoa, Arthropoda; Tracheata; Hexapoda; Insecta;
Pherygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroidea; Drosophilidae; Drosophila.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DPAIYFKEQFLDGDAWINRWVESKHKSDFGKFVLSSGKFYGDLEKDKGLQTSQDARFYAL 77
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Nucleotide sequence of a Drosophila melanogaster gene encoding calreticulin homoloque.",
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                    Score 930, DB 1; Length 416;
Pred. No. 2.3e-76;
5; Mismatches 5; Indels
                                                                                                                                                                                                                                                                                                                     PREVENT SECRETION FROM ER. 24C03B00913408DB CRC64;
                         C-DOMAIN.
4 X APPROXIMATE REPEATS.
                                                                                                                                                                      3 X APPROXIMATE REPEATS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-APR-1993 (Rel. 25, Created)
01-0CT-1993 (Rel. 27, Last sequence update)
01-0CT-1903 (Rel. 40, Last annotation update)
CALRETICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP).
                                                                                                                                                                                                                                                                    ASP/GLU/LYS-RICH.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             406 AA
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MEDLINE-20196006; Pubmed-10731132;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=93208374; PubMed=1296819;
                                                                                                                                                                                                                                                                                                                                               MW;
                                                                                                                                                                                                                                                                                                                                                                                                                    95.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                           94.48;
                                                                                                                                                                                                                                                                                                                                               47994
                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 95.8
Best Local Similarity 94.4
Matches 170; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA Seq. 3:247-250(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       homologue
                                                                                                                                                                                                                                                                                                                                               416 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     [2]
SEQUENCE FROM N.A.
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198
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CRTC_DROME
P29413; Q91
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SFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICGP 122 21 VYLKENF-DNENWEDTWIYSKHPGKEFGKFVLTPGTFYNDAEADKGIQTSQDARFYAASR 79

123 GTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180

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Durbin K.J., Evangelista C.C., Ferraz C., Ferriera S., Fleischmann W., Goldek A., Gong F., Garg N.S., Gelbart W.M., Glasser K., Glodek A., Gong F., Gorna P., Haris M., Harris M., Harris M.L., Harry D., Heiman T.J., Mernandez J.R., Houck J., Houston K.A., Howland T.J., Wei M.-H., Ibegwam C., Jalail M., Kalush F., Karditz S., Kenison J.S., Ketchum K.A., Kimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z., Liang Y., Lin X., Lasko P., Lei Y., Levitsky A.A., Li J., Li Z., Liang Y., Lin X., Merkulov G., Milahina N.V., Mobarry C., Morris J., Moshrefi A., Merkulov G., Milahina N.V., Mobarry C., Morris J., Moshrefi A., Mount S.M., Moy M., Murphy B., Murphy L., Muzny D.M., Nelson D.L., Nelson K.A., Nixon K., Nusskern D.R., Pacleb J.M., Anison R., Shollard J., Puri Y., Reese M.G., Reinert K., Remington K., Saunders R.D.C., Scheeler F., Shen H., Spier B., Spradling A.C., Stapleton M., Strong R., Sun E., Spradling A.C., Turner R., Venter E., Wang A.H., Wang X., Wang Z.-Y., Wasserman D.A., Weinstock G.M., Weissenbach J., Wang Z.-Y., Wasserman D.A., Weinstock G.M., Weissenbach J., Weinstong F.N., Zavori J.S., Zhan M., Zhou X., Zhu X., Zhu X., Smith H.O., Zheng X.H., Zhong F.N., Zavori J.S., Zhan M., Zhou S., Zhu X., Smith H.O., Stene B.C., Zavori J.S., Zhan M., Zhou S., Zhu X., Smith H.O., Stene B.C., Whore R. Weinstone B.G. Drosophila melanogaster.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A human Ro/SS-A autoantigen is the homologue of calreticulin and is highly homologous with onchocercal RAL-1 antigen and an aplysia "memory molecule".

"Invest. 86:332-335(1990).

"I Cilin. Invest. 86:332-335(1990).

"I FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW APPINITY CALCIUM-BINDING SITES.

"SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN."

"I SUBCELLULAR LOCATION: THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE-90307981; Pubmed 2365822;
McCauliffe D.P., Zappi E., Lieu T.S., Michalak M., Sonthelmer R.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Endoplusmic reticulum; Calcium-binding; Repeat; Signal SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -> A (IN REF. 3).
-> L (IN REF. 3).
65D72C69D0BEC427 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro; IPR001580; Calreticulin.
InterPro; IPR001580; Calreticulin.
InterPro; IPR001580; Calreticulin; I.
PRIMIN: PR00626; CALRETICULIN.
PROSITE; PS00014; ER.TARGET; I.
PROSITE; PS00803; CALRETICULIN. I.
PROSITE; PS00803; CALRETICULIN. 2; I.
PROSITE; PS00804; CALRETICULIN. 2; I.
PROSITE; PS00805; CALRETICULIN. 2; I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CALRETICULIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE OF 91-124 AND 182-220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  46808 MW;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL, AE003683, AAF54416.1,
PIR, A37158, A37158.
Flybase, FBgn0005585; Crc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          184
406 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Capra J.D.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CONFLICT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE-08273584; PubMed=2455736; Unnasch T.R., Gallin M.Y., Soboslay P.T., Erttmann K.D., Greene B.N. Unnasch T.R., Gallin M.Y., Soboslay P.T., Erttmann K.D., Greene B.N. Isolation and characterization of expression cDNA clones encoding antigens of Onchocerca volvulus infective larvae."; J. Clin. Invest. 82.262-269(1988).
                                                                                                                                                                                                                                                Eukaryota; Metazoa; Nematoda; Chromadorea; Spirurida; Filarioidea;
Onchocercidae; Onchocerca.
                                                                                                                                                                                                                                                                                                                                                                                                                          Rokeach L.A., Zimmerman P.A., Unnasch T.R., "Epitopes of the Onchocerca volvulus RAL1 antigen, a member of the calreticulin family of proteins, recognized by sera from patients
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SIMILARITY.
9537F298A2D31CD6 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RAL-1 PROTEIN.
4 X APPROXIMATE REPEATS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3 X APPROXIMATE REPEATS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ARG/LYS-RICH (BASIC).
                                                                                   01-JUL-1989 (Rel. 11, Created)
01-NOV-1995 (Rel. 32, Last sequence update)
01-CT-1996 (Rel. 34, Last annotation update)
RAL-1 PROTEIN PRECURSOR (41 KDA LARVAL ANTIGEN).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PIR; A32507; A32507.
InterPro; IPR01580; Calreticulin.
Pfam, PF00262; calreticulin; 1.
PRINTS; PR00626; CALRETICULIN.
ProDom; PD001866; CALRETICULIN.
PROSITE; PS00803; CALRETICULIN.
PROSITE; PS00804; CALRETICULIN.
PROSITE; PS00805; CALRETICULIN.
PROSITER PS00805; CALRETICULIN.
P
                                388 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Calcium-binding; Repeat; Antigen; Signal.
SIGNAL 1 17 POTENTIAL.
                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Infect. Immun. 62:3696-3704(1994).
                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE-94341871; PubMed-7520419;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ΒX
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; M20565; AAA59056.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE OF 53-388 FROM N.A.
                                STANDARD;
                                                                                                                                                                                                                                  Onchocerca volvulus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      with onchocerciasis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           388 AA;
                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              189
189
208
225
242
257
                                                                                                                                                                                                                                                                                                                  NCBI_TaxID-6282
                                RAL1_ONCVO
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DOMAIN
DISULFID
SEQUENCE
                                                              P11012;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DOMAIN
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RAL1_ONCVO
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Gaps

4 VYFKEQFLDGDGWTSRWIESKHK-SDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYALSA 62

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72.0%; Score 699; DB 1; Length 406; 74.2%; Pred. No. 1.3e-55; ive 14; Mismatches 30; Indels

Matches 132; Conservative

Best Local Similarity

Query Match

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REPEAT
DOMAIN
DISULFID
                                                                                                                                  Query Match
                                                                                                SEQUENCE
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DOMAIN
REPEAT
                                REPEAT
REPEAT
REPEAT
REPEAT
                       DOMAIN
                                                                                                                                                                                                                                                                                                                             RESULT 9
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                                                                                                          FE-PFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICGP 122
                                                                                                                      Gaps
                                                               VYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYALSAS 63
                                                                                    19 IYFKEDFSD-DDWEKRWIKSKHKDDFGKWEISHGKFYGDAVKDKGLKTTQDAKFYSIGAK 77
                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoidea;
Rhabditidae; Peloderinae; Caenorhabditis.
                                                                                                                                                      123 GTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                 DNA SEG. 2:235-740(1992).
-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM-BINDING SITES.
-!- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                     "A C. elegans gene encodes a protein homologous to mammalian
                     Length 388;
                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4 X APPROXIMATE REPEATS.
1-1.
1-2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PIR; S25851, S25851.
InterPro; PR001508 Calreticulin.
InterPro; PR001508 Calreticulin.
Pfam; PF00262; calreticulin; 1.
PRINTS; PR000656; Calreticulin; 1.
PRODOM; PD001866; Calreticulin; 1.
PROSITE; PS00014; ER_TARGET; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00803; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
Endoplasmic reticulum; Calcium-binding; Repeat; Sig
                     Query Match

68.4%; Score 664; DB 1; LA
Best Local Similarity 67.4%; Pred. NO. 1.7e-52;
Matches 120; Conservative 26; Mismatches 30;
                                                                                                                                                                                                                                                       01-AUG-1992 (Rel. 23, Created)
01-AUG-1992 (Rel. 23, Last sequence update)
01-FEB-1994 (Rel. 28, Last annotation update)
                                                                                                                                                                                                                                    395 AA.
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P-DOMAIN.
C-DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
STRAIN-BRISTOL N2;
MEDLINE-92329978; Pubmed-1627827;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; X59589; CAA42159.1; -. PIR; S25851; S25851.
                                                                                                                                                                                                                                    STANDARD;
                                                                                                                                                                                                                                                                                                               Caenorhabditis elegans
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192
301
395
250
216
                                                                                                                                                                                                                                                                                           CALRETICULIN PRECURSOR
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                                                                                                                                                                                                                                                                                                                                                                                                                                 calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                                           Smith M.J.;
                                                                                                                                                                                                                                    CRTC_CAEEL
P27798;
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REPEAT
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                                                                                                                                                                                                                       CRTC_CAEEL
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                                                                                                                                                                                                                                                                                                                       3,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FE-PFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICGP 122
                                                                                                                                                                                                                                                                                                                                                                    4 VYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYALSAS 63
                                                                                                                                                                                                                                                                                                                                                                                              123 GTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mueller-Taubenberger A., Gerisch G.;
Submitted (DEC-1997) to the EMBL/GenBank/DDBJ databases.
-!-FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM-BINDING SITES (BY SIMILARITY).
-!- SUBCELLULAR LOCATION: BNDOPLASMIC RETICULUM LUMEN.
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                       63.8%; Score 619.5; DB 1; Length 395; 63.5%; Pred. No. 1.7e-48; ive 26; Mismatches 36; Indels 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CALRETICULIN.
4 X 12 AA APPROXIMATE REPEATS.
1-1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Endoplasmic reticulum; Calcium-binding; Repeat; Signal.
SIGNAL
1 19
                                                                                                                                                                               PREVENT SECRETION FROM ER 35CA7D2EC1D56B03 CRC64;
    1-3.
1-4.
3 x APPROXIMATE REPEATS.
2-1.
2-2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15-DEC-1998 (Rel. 37, Last sequence update)
15-DEC-1998 (Rel. 37, Last annotation update)
CALRETICULIN PRECURSOR.
Dictyostellum discoideum (Slime mold).
Eukaryota, Mycetozoa; Dictyostellida; Dictyostellum.
                                                                                                                                  ASP/GLU/LYS-RICH.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DictyDb; DD00042; ...
InterPro; IPR001580; Calreticulin.
InterPro; IPR000866; ER_target.
Pfam; PP00262; Calreticulin; 1.
PRINTS; PR00626; CALRETICULIN.
PROSITE; PS00804; CALRETICULIN.2; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00804; CALRETICULIN_REPEAT; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15-DEC-1998 (Rel. 37, Created)
15-DEC-1998 (Rel. 37, Last seg
                                                                                                                                                                                                         ΜW.
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233
250
250
264
278
292
390
158
395
45616 h
                                                                                                                                                                                                                                                                                                                       Conservative
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                                                                                                                                                                                                            AA;
                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
  222
239
254
254
268
282
332
332
392
395 A
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191
191
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                                                                                                                                                                                                                                                                                                    Best Local Sim
Matches 113;
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Q23858;
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398 4
401 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Viereck R.:
                                                                                                                                                                                                                                                                                                                                                                                                                                CRTC_BETVU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CARBOHYD
                     SEQUENCE
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CRTC_BETVU
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
Navazzio L., Baldan B., Martin W., Mariani P.;
Evidence for conservation of a calcium homeostat component:
purification characterization and cloning of calreticulin from Euglena gracilis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                                                                                                                                                                                                                                                                                                                                                                                            121 GPGTKKVHVIFNYKGKNVLINKDI-RCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSL 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                              4 VYFKEQFLDGDGWTSRWIESK-HKSD--FCKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
                                                                                                                                                                                                                                                                                                                     2-3
BY SIMILARITY
PREVENT SECRETION FROM ER (POTENTIAL).
BAF273694FB6FC37 CRC64;
                                                                                                                                                                                                                                                              .,
8
1-2.
1-3.
1-4.
3 x 11 AA APPROXIMATE REPEATS.
2-1.
                                                                                                                                                                                                                       Length 424;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Property if the property of th
                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Euglenozoa; Euglenida; Euglenales; Euglena.
NCBI_TuxID 3039;
                                                                                                                                                                                                                                                            33;
                                                                                                                                                                                                                       Query Match
Best Local Similarity 57.2%; Pred. No. 4.7e-41;
Matches 103; Conservative 36; Mismatches 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20-AUG-2001 (Rel. 40, Created)
20-AUG-2001 (Rel. 40, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             401 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
                                                                                                                                                                      3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; Y09816; CAA70945.1; -.
                                                                                                                                                                    48350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CALRETICULIN PRECURSOR.
                                                                                                                                                 421
424 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Euglena gracilis.
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                                                                                                            REPEAT
DISULFID
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                   REPEAT
REPEAT
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                                                                        REPEAT
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   SIIIIIIIIS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "Nucleotide sequence from sugar beet calreticulin.";
Submitted (OCT-1997) to the EMBL/GenBank/DDBJ databases.
-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND
LOW AFFINITY CALCIUM-BINDING SITES (BY SHILLARITY).
-!- SUBCELLULAR LOCATION: BENDOPLASMIC RETICULUM LUMEN (BY SIMILARITY).
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                            64 F-EPFSNKGOTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICGP 122
                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Calcium-binding; Repeat; Signal; Glycoprotein.
                                                                                                                                                                                                                                                                         20 IYYKETF--EPDWETRWTHSTAKSDYGKFKLTSGKFYGDKAKDAGIQTSQDAKFYAISSP 77
                                                                                                                                                                                                                                      4 VYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYALSAS 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                123 GTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N-LINKED (GLCNAC. . .) (POTENTIAL).
N-LINKED (GLCNAC. . .) (POTENTIAL).
PREVENT SECRETION FROM ER (POTENTIAL).
565FEC3489F77CA7 CRC64;
   PREVENT SECRETION FROM ER (POTENTIAL). 056B074C16292674 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Beta vulgaris (Sugar beet).

Beta vulgaris (Sugar beet).

Sukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Caryophyllidae; Caryophyllales; Chenopodiaceae; Beta.
                                                                                                                                                                                 ŝ
                                                                                                                         Length 401;
                                                                                                                                                                                 Indels
                                                                                                                         DB 1;
                                                                                                                                                                              42;
                                                                                                                   Score 535.5; DB Pred. No. 6e-41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL, AJ002057; CAA05161.1; -.
Mendel; 32549; Betvu;1166;32549;
InterPro; IPR001880; Calreticulin.
InterPro; IPR001886; Extarget.
Pfam; PF00262; Calreticulin; 1.
PR.0975; P000626; Calreticulin; 1.
PRODCM; P0001866; Calreticulin; 1.
PROSITE; PS00014; Ex_TARGET; 1.
PROSITE; PS00803; CALRETICULIN_1.
PROSITE; PS00803; CALRETICULIN_2; 1.
PROSITE; PS00803; CALRETICULIN_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              416 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20-AUG-2001 (Rel. 40, Created)
20-AUG-2001 (Rel. 40, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation updat.
CALRETICULIN PRECURSOR.
                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           POTENTIAL.
CALRETICULIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                              30;
401 P
45910 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
STRAIN~VV-D/ZR5; TISSUE~Leaf;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          48136 MW;
                                                                                                                   55.1%;
56.7%;
                                                                                                                                                                              Matches 101; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STANDARD;
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                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AA;
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Wed

3

6; Gaps

43; Indels

Mismatches

31;

Conservative

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66;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 13
CRTC_PRUAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CHAIN
                                                                                                                             22
      Matches
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PRINTS; PR00662; calreticulin; I.
PROSTR; P800014; ER_TAKGET; I.
PROSTR; PS00004; CALRETICULIN 1; I.
PROSTR; PS00804; CALRETICULIN 1; I.
PROSTR; PS00804; CALRETICULIN 2; I.
ENGORIE; PS00805; CALRETICULIN 2; I.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal; Glycoprotein.
                                                                                                                                                                                                                                                                                     SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids I; Malpighiales; Euphorbiaceae; Ricinus.
                                                                  Gaps
                                                                                                                          4 VYFKEQFLDGDGWTSRWIESKHKSD---FGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
                                                                                                                                                              121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSL 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE-97435975; PubMed-9290642; Coughlan S.J., Hastings C., Winfrey R. Jr.; "Cloning and characterization of the calreticulin gene from Ricinus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CALRETICULIN.
N-LINKED (GLCNAC. ..) (POTENTIAL).
N-LINKED (GLCNAC. ..) (POTENTIAL).
PREVENT SECRETION FROM ER (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Plant Mol. Biol. 34:897-911(1997).
-!- FUNCTION: THES PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM-BINDING STITES.
-!- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                     ;
6
      Length 416;
54.7%; Score 531; DB 1; Length 41
55.9%; Pred. No. 1.6e-40;
ive 28; Mismatches 45; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DD5F452E76CC7F8C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20-AUG-2001 (Rel. 40, Created)
20-AUG-2001 (Rel. 40, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ricinus communis (Castor bean).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  47522 MW;
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                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CALRETICULIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   152 1
412 4
415 AA;
                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=3988;
                                                              Matches 100;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CRTC_RICCO
P93508;
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   Query Match
Best Local 9
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CRTCCO
ID CRTICCO
ID 20-AUG
DT 20-AU
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Length 415;

Score 527; DB 1; Pred. No. 3.6e-40;

54.3%; 55.3%;

Query Match Best Local Similarity

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              apricot (Prunus armeniaca cv. Bergeron).";
Submitted (MAR-1999) to the EMBL/GenBank/DDBJ databases.
-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND
LOW AFFINITY CALCIUM-BINDING SITES (BY SIMILARITY).
-!- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN (BY SIMILARITY).
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                       Eukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta,
Spermatophyta, Magnoliophyta, eudicotyledons, core eudicots, Rosidae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Probom; PD001866; Calreticulin; 1.
PROSITE; PS00014; ER.TARGET; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 2.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal; Glycoprotein.
                                                                                                                      SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4 VYFKEQFLDGDGWTSRWIESKHKSD---FGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
VYFKEQFLDGDGWTSRWIESKHKSD---FGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
                             121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSL 179
                                                                                                                                                                                                                                                                                 N-LINKED (GLCNAC. ..) (POTENTIAL).
N-LINKED (GLCNAC. ..) (POTENTIAL).
PREVENT SECRETION FROM ER (POTENTIAL).
4F5F94CBAA6C6690 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRAIN-CV. BERGERON; TISSUE-Mesocarp, and Endocarp, Mbeguie-A-Mbeguie D., Fils-Lycaon B.R.; "Molecular cloning and nucleotide sequence of a calreticulin from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -----
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40, Last annotation update)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Interpro; IPR001580; Calreticulin.
Interpro; IPR000886; Ex.target.
Pfam; PF00262; calreticulin; I.
PRINTS; PR00626; CALRETICULIN.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STANDARD;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 421 AA;
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Best Local Similarity
Matches 99; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=36596;
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CARBOHYD
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                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its most by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@lsb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Komateu S., Li Z.;

"Cloning the CDNA encoding a calcium-binding protein which involved in

"Cloning the CDNA encoding a calcium-binding protein which involved in

the regeneration of rice cultured suspension cells.";

Submitted (DEC-1998) to the EMBL/GenBank/DDBJ databases.

- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND

LOW AFFIRITY CALCIUM-BINDING SITES (BY SIMILARITY).

- SUBCKLIDLAR LOCATION: ENDOPLASMIC RETICULUM LUMEN (BY SIMILARITY).

- SIMILARITY: BKLONGS TO THE CALRETICULIN FAMILY.
                                        SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                                                               PRINTS, PROD622; CALRETICULIN; 1.
PRINTS, PROD665; CALRETICULIN; 1.
PROD7TE; PSO0014; EM_TARGET; 1.
PROSTTE; PSO0004; CALRETICULIN_1; 1.
PROSTTE; PSO0006; CALRETICULIN_1; 1.
PROSTTE; PSO0005; CALRETICULIN_2; 1.
PROSTTE; PSO0005; CALRETICULIN_2; 1.
ENGOLUM; CALLETICULIN_2; 1.
ENGOLUM; CALLETICULIN_2; 1.
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26 VFFEERF -- EDGWDKRWVTSEWKKDENLAGEWNYTSGKWNGD-PNDKGIQTSEDYRFYAI 82
                                                                                                                             121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSL 179
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              143 GYSTKKVHAILNYNNTNNLIKKDVPCETDQLTHVYTFIIRPDATYSILIDNLEKQTGSL 201
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N-LINED (GLCNAC. ..) (POTENTIAL).
PREVENT SECRETION FROM ER (POTENTIAL).
3172634F1580FC14 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukuryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Lillopsida; Poales; Poaceae; Ehrhartoldoae; Oryzeae; Oryzea.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               54.3%; Score 527; DB 1; Length 42
55.9%; Pred. No. 3.7e-40;
:1ve 31; Mismatches 42; Indels
                                                                                                                                                                                                                                                                                                                              20-AUG-2001 (Rel. 40, Created)
20-AUG-2001 (Rel. 40, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
CALRETICULIN PRECURSOR.
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InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
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Matches 100; Conservative
                                                                                                                                                                                                                                                                                     STANDARD;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID-4530;
                                                                                                                                                                                                                                                                                   CRTC_ORYSA
Q9SLY8;
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                                                                                                                                                                                                                                                 01-NOV-1995 (Rel. 32, Last sequence update)
15-JUL-1998 (Rel. 36, Last annotation update)
CALRETICULIN, BRAIN ISOFORM 2 PRECURSOR (CRP55) (CALREGULIN) (HACBP).
                            148 GYSTKKVHTIFTKNDKNHLIKKDVPCETDQLSHVYTLIIHPDATYSILIDDNVEKQSGSI 206
121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSL 179
                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Biochim. Biophys. Acta 1202:70-76(1993).
-1- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM-BINDING SITES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Liu N., Fine R.E., Johnson R.J.; "Comparison of cDNAs from bovine brain coding for two isoforms of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ASP/GLU/LYS-RICH.
BY SIMILARITY.
N-LINKED (GLCNAC. ..) (POTENTIAL).
PREVENT SECRETION FROM ER.
0257E959F71528BC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ď
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Endoplasmic reticulum; Calcium-binding; Repeat; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -!- SUBUNIT: MONOMER (BY SIMILARITY).
-!- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4 X APPROXIMATE REPEATS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3 X APPROXIMATE REPEATS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PROSITE; PS00804; CALRETICULIN_2; 1. PROSITE; PS00805; CALRETICULIN_REPEAT; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
Pfam; PF00262; Calreticulin; 1.
PRINTS; PR00626; CALRETICULIN.
ProDom; PD001866; Calreticulin; 1.
PROSITE; PS00014; ER_TARGET; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_1; 1.
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P-DOMAIN.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE-93385184; PubMed-8373827;
                                                                                                                                                                                                                        01-NOV-1995 (Rel. 32, Created)
01-NOV-1995 (Rel. 32, Last seq
15-JUL-1998 (Rel. 36, Last ann
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     calreticulin. ";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TISSUE-Brain;
                                                                                                                                                                       CRT2_BOVIN
P42918;
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DB 1; Length 421;

53.8%; Score 522.5;

4

Best Local Similarity 55.6%; Pred. No. 9.4e-40; Matches 109; Conservative 12; Mismatches 30; Indels 45; Gaps

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45 KDKGLQTSQDARFYALSASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTD 104
                              1 EPAVYFKEOFLDGDGWTSRWIESKHKSD------FGKFVLSSGKFYGDEE 44
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Search completed: January 9, 2002, 15:12:14 Job time: 656 sec

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GenCore version 4.5
Copyright (c) 1993 - 2000 Compugen Ltd.
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OM protein - protein search, using sw model

January 14, 2002, 08:48:49 Run on:

; Search time 23.38 Seconds
(without alignments)
570.282 Million cell updates/sec

US-09-828-000-3 180 Title: Perfect score: Sequence:

1 EPAVYFKEQFLDGDGWTSRW.......PDNTYEVKIDNSQVESGSLE 180

OLIGO Gapop 60.0 , Gapext 60.0 Scoring table:

522463 seqs, 74073290 residues

Searched:

Total number of hits satisfying chosen parameters: Word size :

14

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Listing first 45 summaries

Database :

/SIDS8/gcgdata/geneseq/geneseqp/AA1991.DAT:*
/SIDS8/gcgdata/geneseq/geneseqp/AA1991.DAT:*
/SIDS8/gcgdata/geneseq/geneseqp/AA1992.DAT:*
/SIDS8/gcgdata/geneseq-geneseqp/AA1994.DAT:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

		Description	Human vasostatin (Recombinant human	60 kD Ro (Ro/SSA)	Human MBP-calretic	Calreticulin. Hom	Calreticulin. Hom	Recombinant human	Recombinant human	Recombinant delta-	Recombinant human	Human cClqR bindin
	ļ	at .	AAY92351	AAY92350	AAP92276	AAY92349	AAY00927	AAW11156	AAY92352	AAY92354	AAY92355	AAY92353	AAY00924
	ş	8 :	21	21	10	21	20	18	21	21	21	21	20
	Query	rengru	180	400	417	417	417	401	61	9	280	49	122
æ	Query	March	100.0	100.0	100.0	100.0	90.0	42.8	33.9	33.3	33.3	27.2	20.0
	3	acore	180	180	180	180	162	77	61	9	9	49	36
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1 epavyfkeqfldgdgwtsrwieskhksdfgkfvlssgkfygdeekdkglqtsqdarfyal 60

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	12 13 14	36 19 19	10.	0.6.6	122 122 336	20 20 12	AAY00926 AAY00925 AAR12312	Rat cClqR binding Mouse cClqR bindin Partial sequence o	⊏ 0
							ALIGNMENTS	1	
RES AAY ID	RESULT 1 AAY92351 LD AAY92351		standard;		Protein;		180 AA.		
YX YX	AAY92351	51;							
¥E3	10-AUG-2000	-2000		(first	entry)	γ)			
DE	Human v	vasostatin	tati		(calreticulin	icul	N-terminal 180 amino	acids).	
XX XX XX XX XX	MBP-ca angioge neuropi immunoe	lreti enesi rotec suppr intes	culls; itive	inhib inhib e; an ive;	altos ition tidia antii	e bi ; en beti nfla	MBP-calreticulin; maltose binding protein; vasostatin; N-termina; angiogenesis; inhibition; endothelial cell; anti-angiogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; hepatic; immunosuppressive; antiinflammatory; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.	n; N-terminal; logenic; sal; hepatic; rotic;	
80 00 00 00	Homo sapiens Synthetic.	apien tic.	S						
X A	WO200020577	20577	-A1						
7 G	13-APR-2000	-2000	Ŀ						
PF	05-OCT-1999	-1999		99WO	99WO-US23240	240.			
PR	06-OCT	-1998		9808	98US-0103	438.			
PA S	(USSH)	sn (DEP1	r HEA	DEPT HEALTH &	HUMAN	AN SERVICES.		
YY Id	Tosato	Ď,	Pike	s SE,	Yao	ŗ.			
XX DR	WPI; 20	000-3	0376	2000-303767/26					
Y P Y	Inhibiting useful for	ting	endc	endothelial suppressing		cell c tumor	growth and anglogenesis using r growth	using calreticulin,	
PS X	Claim 4	4; Pa	Page 8	82; 9	:dd66	English	ish.		
88	A nove.	1 met	hod +	of to	nhibi	ting	A novel method of inhibiting endothelial cell growth comprises	comprises	
ខ្ល	Fragme	nts o	ğ.	alret	iculi	n Ca	uses at least 40% inhibi	tion of angiogenesis,	,
88	tumor (growt or in	hibi	nd/or iting	angi	thel	lai cell growth (claimed esis in a patient. The). The method may be anglogenesis is	φ
ខ្លួ	associa	ated	witl	h a d	iseas	e ot	her than a tumor that is betic neuropathy, retrol	associated with	
888	trachor	ma, n	eove	ascul	ar gl	auco	ma, psoriasis, anglofibr	omas, immmune	
ខ្ល	neovaso	matic cular	n, c izat	ther tion,	DSCLE	rosı lar	s, excessive wound repai degeneration, corneal gr	r, retinal aft rejection,	
ខូខូ	contac:	t len toid	art)	verwe	ar, C s, sy	rohn	's disease, non-immune i ic lupus erythromatosus,	nflammation, thyroiditis,	
888	Goodpa	sture	8,3	syndr	ome,	syst	emic vasculitis, sclerod	erma, Sjorgen's	
38	syndromalso be	e use	d fo	oldos or tr	ıs an eatin	a pr g/in	imary billary cirrnosis) hibiting tumor growth es	. The method may pecially	
ខ្ល	Kaposi	's sa	rcon	na (c	laime	đ).			
SS	Sequence	e)	180	180 AA;					
ОМ	Query Match Best Local Similarity	ch 1 Sim	illar	rity	100.0%; larity 100.0%;	60.	Score 180; DB 21; Pred. No. 2e-187;	180;	
2	atches	180;	Ö	nserv	ative		0; Mismatches 0; In	sd	ö
δ d	⊞ — ;	PAVYE	, KEQ1	FLDGD	GWTSR	WIES	EPAVYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL	SLQTSQDARFYAL 60	

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Recombinant human MBP-calreticulin comprises the sequence of human calreticulin (see AAY93149) without the 17 N-terminal amino acids. A novel method of inhibiting endothelial cell growth comprises contacting the cells with calreticulin (or its fragments/variants). Fragments of calreticulin causes at least 40% inhibition of unglogenesis, tumor growth and/or endothelial cell growth (claimed). The method may be used for inhibiting anglogenesis in a patient. The nathod may be used for inhibiting anglogenesis in a patient. The inglogenesis is associated with a disease other than a tumor that is ussociated with meovascularization (e.g. diabetic neuropathy, retrolnetal ibrophasia, trachoma, neovascular glaucoma, psoriasis, anglofibromas, immunot inflammation, atherosclerosis, excessive wound repair, retinal neovascularization, macular degeneration, corneal graft rejection, contact lens overwear, Crohn's disease, non-immune inflammation, contact lens overwear, Crohn's disease, non-immune inflammation, contact lens overwear, crohn's disease, non-immune inflammation, systemic vasculitis, acleroderma, Sjorgen's syndrome, sarcoldosis and primary billary cirrhosis). The method may wanced the used for treating/inhibiting tumor growth especially
                                                                                                                                                                                                                                              MBP-calreticulin; maltose binding protein; anglogenesis; inhibition; endothelial cell; anti-anglogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Inhibiting andothelial cell growth and angiogenesis using calreticulin, useful for suppressing tumor growth
                                                SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
             (USSH ) US DEPT HEALTH & HUMAN SERVICES.
                                                                                                                                                                                                                        Recombinant human MBP-calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 4; Puge 80-81; 99pp; English.
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                                                                                                                                           AAY92350 standard; Protein; 400
                                                                                                                                                                                                                                                                                                                                                                                              99WO-US23240
                                                                                                                                                                                                                                                                                                                                                                                                                      98US-0103438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N-PSDB; AAA09346, AAA09347.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tosato G, Pike SE, Yao L;
                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Kaposi's sarcoma (claimed)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2000-303767/26
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Synthetic peptides corresp. to an epitopic core of Ro antigen are expressed recombinantly to detect autosmetibodies, for identification of autoimmune diseases. These epitopes are AAs 24-36, 23-36, 188-209, or 241-255. The peptides may be substd. for ribonucleoprotein particle
                                                                                                         121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
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SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA sequences encoding antigenic epitope(s) of Ro (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%; Score 180; DB 10;
100.0%; Pred. No. 4.2e-187;
tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                   Sjorens syndrome; systemic lupus erythematosus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sontheimer RD, Capra JD, McCauliffe DP;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure; Fig 2; 88pp; English.
                                                                                                                                                                                                                             AAP92276 standard; protein; 417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           88US-0171634.
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                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                          60 kD Ro (Ro/SSA) antigen
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Best Local Similarity 100.
Matches 180; Conservative
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N-PSDB; AAP92276.
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Gaps

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Length 400; Indels 0

100.0%; Score 180; DB 21; 100.0%; Pred. No. 4.1e-187; 11ve 0; Mismatches 0;

Query Match 100. Best Local Similarity 100. Matches 180; Conservative

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MBP-calreticulin; maltose binding protein; angiogenesis; inhibition; endothelial call; anti-angiogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cell growth and angiogenesis using calreticulin, \mathsf{tumor}\ \mathsf{growth}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (USSH ) US DEPT HEALTH & HUMAN SERVICES.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /label= mature_protein
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1..17
                                    AAY92349 standard; Protein; 417 AA
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                                                                                                                                                    (first entry)
                                                                                                                                                                                                        Human MBP-calreticulin.
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                                                                                                                                                 10-AUG-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tosato G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Seguence
                                                                                           AAY92349;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Protein
AAY 92 34 9

AAY 92 34 9

AAY 92 4 9

AAY
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contacting the cells with calreticulin (or its fragments/variants). Fragments of calreticulin causes at least 40% inhibition of angiogenesis, transment growth and/or endothelial cell growth (claimed). The method may be used for inhibiting angiogenesis in a patient. The angiogenesis is associated with a disease other than a tumor that is associated with neovascularization (e.g. diabetic neuropathy, retrolental fibroplasia, trachoma, neovascular glaucoma, psoriasis, angiofibromas, immune inflammation, atherosclerosis, excessive wound repair, retinal neovascularization, macular degeneration, corneal graft rejection, contact lens overwear, Crohn's disease, non-immune inflammation, rheumatoid arthritis, systemic lupus erythromatosus, thyroiditis, syndrome, systemic lusus erythromatosus, thyroiditis, syndrome, sarcoidosis and primary biliary cirrhosis). The method may also be used for treating/inhibiting tumor growth especially
A novel method of inhibiting endothelial cell growth comprises
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                                Gaps
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0
Score 180; DB 21; Length 417; Pred. No. 4.2e-187; 0; Mismatches 0; Indels 0;
Match 100.0%;
Local Similarity 100.0%;
les 180; Conservative 0;
 Query Match
               Best Loca
Matches
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1 EPAVYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60

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SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120 61

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This sequence is calreticulin, a homologue of Clq and collectin receptor (CClqR). The invention relates to the use of a cClqR binding domain in a medicament to effect complement ubiquitin (CUB) functionality, and an inhibitor of the cClqR binding domain in a medicament to inhibit CUB functionality. The cClqR binding domain, or its inhibitor, can be used to treat a human or animal body. Particularly an inhibitor is used to complement activation involved in the initiation and maintenance of inflammation, for example in mycoradial infarction, brain ischaemia (stroke), gut ischaemia, rheumatoid arthritis, systemic lupus
                                                                                                                                                                                                                                                                      Clq and collectin receptor; cClqR binding domain; complement ubiquitin; CUB functionality; inhibitor; complement activation; inflammation; myocardial infarction; brain ischaemia; gut ischaemia; amyloid plaque; rheumatoid arthritis; systemic lupus erythematosus; Alzheimer's disease; immune complex nephritis; therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                               78 sasfepfsnkgqtlvvqftvkheqnidcgggyvklfpnsldqtdmhgdseynimfgpdic 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     erythematosus, burns, immune complex nephritis, and to treat amyloid plaques in Alzheimer's disease. The use of cClqR binding domain or inhibitor enables the CUB domain functionality to be modulated using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYALSASFEPFSNKGQTLVVQF 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Use of a cClqR binding domain - to modulate complement ubiquitin (CUB) functionality.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 417;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  90.0%; Score 162; DB 20; L
100.0%; Pred. No. 1.5e-167;
iive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Disclosure; Page 26-27; 31pp; English.
                                                                                                                                         AAY00927 standard; Protein; 417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      low molecular weight molecule.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98WO-GB02430.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       97GB-0016998.
                                                                                                                                                                                                          (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (UYLE-) UNIV LEICESTER,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 1999-180404/15.
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les 162; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      417 AA;
                                                                                                                                                                                                                                                                                                                                                                                                      WO9907406-A1
                                                                                                                                                                                                                                         Calreticulin
                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       L2-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12-AUG-1997;
                                                                                                                                                                                                         28-MAY-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Schwaeble W;
                                                                                                                                                                                                                                                                                                                                                                                                                                        18-FEB-1999,
                                                                                                                                                                          AAY00927;
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Matches
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endothelial cell; anti-angiogenic; neuroprotective; antidiabetic;
                                                                                             99WO-US23240
                                                                                                            98US-0103438
                                                                                                                                              Yao L;
                                                                                                                                             Pike SE,
                                                                                                                                                              WPI; 2000-303767/26
                                                                                                                                                                                                                                                                                                                                                                      61 AA;
                                                          WO200020577-A1
                                  Homo sapiens.
                                                                                            05-0CT-1999;
                                                                                                            06-OCT-1998;
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                                           Synthetic.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                              Tosato G,
                                                                                                                                                                                                                                                                                                                                                                      Sequence
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                                                                                                                                                                                                                                                                                                                                         The present sequence is calreticulin. It and a C-domain derived peptide (AAW06736) are useful for treating a patient to inhibit restenosis. The calreticulin-type opds. are administered either parenterally, intravenously or via a catheter and can target areas of vascular damage to inhibit or prevent restenosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         104 DMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MBP-calreticulin; maltose binding protein; angiogenesis; inhibition;
                                                                                                                                                                                                                                                                                          Inhibition of restenosis in patients - using calreticulin or a C-domain polypeptide of calreticulin or a variant with the same activity.
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Pred. No. 3.1e-75;
0; Mismatches 0; Indels
139 LINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
         Recombinant human calreticulin residues 120-180.
                                                                                                                             calreticulin; C-domain; restenosis; inhibitor.
                                                                                                                                                                                                                                                                                                                                                                                                                  42.8%; Score //.
100.0%; Pred. No. 3.1e-
                                                          AAW11156 standard; peptide; 401 AA
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                                                                                                                                                                                                                                                                                                                            Disclosure; Fig 1; 48pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAY92352 standard; Protein; 61
                                                                                                                                                                                                                96US-0649417.
95US-0442844.
                                                                                                                                                                                                96WO-IB00471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   164 TYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10-AUG-2000 (first entry)
                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                          Lucas A, Michalak M;
                                                                                                                                                                                                                                         (UYAL-) UNIV ALBERTA.
                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
'-ha 77; Conserve
                                                                                                                                                                                                                                                                          WPI; 1997-012036/01.
                                                                                                                                                                                                                                                                                                                                                                                              401 AA;
                                                                                                                                              Homo saptens
                                                                                           31-MAY-1997
                                                                                                                                                              WO9636643-A1
                                                                                                                                                                                                                        17-MAY-1995;
                                                                                                            Calreticulin
                                                                                                                                                                                                                16-MAY-1996;
                                                                                                                                                                               21-NOV-1996
                                                                           AAW11156;
                                                                                                                                                                                                                                                                                                                                                                                               Sequence
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ID AAX9
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A novel method of inhibiting endothelial cell growth comprises

contacting the cells with calreticulin (or its fragments/variants).

Exagments of calreticulin causes at least 40% inhibition of andiogenesis,

tumor growth and/or endothelial cell growth (claimed). The method may be

used for inhibiting angiogenesis in a patient. The angiogenesis is

associated with a disease other than a tumor that is associated with

neovascularization (e.g. diabetic neuropathy, retrolental fibroplasia,

trachoma, neovascular glaucoma, psoriasis, angiofibromas, immune

inflammation, atherosclerosis, excessive wound repair, retinal

contact lens overwear, Crohn's disease, non-immune inflammation,

cheumatoid arthritis, systemic lupus erythromatosus, thyroiditis,

coodpasture's syndrome, systemic vasculitis, soleroderma, Sjorgen's

syndrome, sarcoidosis and primary biliary cirrhosis). The method may

also be used for treating/inhibiting tumor growth especially

Kaposi's sarcoma (claimed).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MBP-calreticulin; maltose binding protein; angiogenesis; inhibition; endothelial cell; anti-angiogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antilnflammatory; heptic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Inhibiting endothelial cell growth and angiogenesis using calreticulin,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   120 CGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSL 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (USSH ) US DEPT HEALTH & HUMAN SERVICES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   useful for suppressing tumor growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 4; Page 82-83; 99pp; English.
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This sequence comprises recombinant human calreticulin (AAY92350)

missing the N-terminal 120 amino acids.

A novel method of inhibiting endothelial cell growth comprises

contacting the cells with calreticulin (or its fragments/variants).

Eragments of calreticulin causes at least 40% inhibition of
angiogenesis, tumor growth and/or endothelial cell growth (claimed). The
method may be used for inhibiting angiogenesis in a patient. The
angiogenesis is associated with a disease other than a tumor that is
associated with neovascularization (e.g. diabetic neuropathy, retrolental
cit libroplasia, trachoma, neovascular glaucoma, psoriasis, angiofibromas,
immune inflammation, atherosclerosis, excessive wound repair, retinal
contact lens overwear, Crohn's disease, non-immune inflammation,
contact lens overwear, Crohn's disease, non-immune inflammation,
contact lens verwear, systemic vasculitis, scleroderma, Sjorgen's
syndrome, sarcoidosis and primary biliary cirrhosis). The method may
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MBP-calreticulin; maltose binding protein; angiogenesis; inhibition; endothelial cell; anti-angiogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
                                                                                                                                                                                                                                          Inhibiting endothelial cell growth and anglogenesis using calreticulin, useful for suppressing tumor growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        33.3%; Score 60; DB 21; Length 280; 100.0%; Pred. No. 6.5e-57; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Recombinant human calreticulin residues 132-180.
                                                                                                          USSH ) US DEPT HEALTH & HUMAN SERVICES.
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                                                                                                                                                                                                                                                                                                               Claim 4; Page 86; 99pp; English.
                  99WO-US23240.
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                                                              98US-0103438
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity
                                                                                                                                                                                              WPI; 2000-303767/26
                                                                                                                                                      Pike SE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        280 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO200020577-A1.
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                  05-OCT-1999;
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                                                              36-OCT-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13-APR-2000,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                      Tosato G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Synthetic
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A novel method of inhibiting endothelial cell growth comprises contacting the cells with calreticulin (or its fragments/variants). Fragments of calreticulin causes at least 40% inhibition of angiogenesis, tumor growth and/or endothelial cell growth (claimed). The method may be used for inhibiting angiogenesis in a patient. The angiogenesis is associated with a disease other than a tumor that is associated with neovascularization (e.g. diabetic neuropathy, retrolental fibroplasia, trachoma, neovascular glaucoma, psoriasis, angiofibromas, immune inflammation, atherosclerosis, excessive wound repair, retinal neovascularization, macular degeneration, corneal graft rejection, contact lens overwear, Crohn's disease, non-immune inflammation, theumatoid arthritis, systemic lupus erythromatosus, thyroiditis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MBP-calreticulin; maltose binding protein; angiogenesis; inhibition; endothellal call; anti-angiogenic; neuroprotective; antidiabetic; cytoStatic; dermalogical; immunosuppressive; antinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
                                                                                                                                                                                                                                                                                                                                                                                                Inhibiting endothelial cell growth and angiogenesis using calreticulin, useful for suppressing tumor growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Goodpasture's syndrome, systemic vasculitis, scleroderma, Sjorgen's syndrome, sarcoidosis and primary biliary cirrhosis). The method may also be used for treating/inhibiting tumor growth especially
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 33.3%; Score 60; DB 21; I 100.0%; Pred. No. 1.6e-57; tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                 (USSH ) US DEPT HEALTH & HUMAN SERVICES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Recombinant delta-120 calreticulin.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 4; Page 85; 99pp; English.
                                                                                                                                                                           99WO-US23240
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Best Local Similarity 100.
Matches 60; Conservative
                                                                                                                                                                                                                                                                                                          Tosato G, Pike SE,
                                                                                                                                                                                                                                                                                                                                                      WPI; 2000-303767/26
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                  Homo sapiens.
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                                            Synthetic.
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28-MAY-1999
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ID AAY0
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                                                                                                                                                                                                                                                                                                                                                            contacting the cells with calreticulin (or its fragments).
Fragments of calreticulin causes at least 40% inhibition of angiogenesis, tumor growth and/or endothelial cell growth (claimed). The method may be used for inhibiting angiogenesis in a patient. The angiogenesis is ussociated with a disease other than a tumor that is associated with neovascularization (e.g. diabetic neuropathy, retrolental fibroplasia, trachoma, neovascular glaucoma, psociasis, angiofibromas, immune inflammation, atheroscierosis, excessive wound repair, retinal concent lens overwear, Crobin's disease, non-immune inflammation, rheumation arbitists, systemic lupus erythromatosus, thyroiditis, coopasture's syndrome, systemic lupus erythromatosus, thyroiditis, syndrome, sarcoidosis and primary cirrhosis). The method may class be used for treating/inhibiting tumor growth especially
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Clq and collectin receptor; cClqR binding domain; complement ubiquitin; CUB functionality; inhibitor; complement activation; inflammation; myocardial infarction; brain ischaemia; gut ischaemia; amyloid plaque; rheumatoid arthritis; systemic lupus erythematosus; Alzheimer's disease;
                                                            Inhibiting endothelial cell growth and angiogenesis using calreticulin, useful for suppressing tumor growth
                                                                                                                                                                                                                                                                                                                                                   Gaps
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                                                                                                               A novel method of inhibiting endothelial cell growth comprises
                                                                                                                                                                                                                                                                                                                                                                     132 NYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                             Length 49;
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                                                                                                                                                                                                                                                                                                                            DB 21; Le
1.2e-45;
hes 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human cClqR binding domain protein sequence.
                                                                                                                                                                                                                                                                                                                           27.2%; Score 49; DB 100.0%; Pred. No. 1.2
(USSH ) US DEPT HEALTH & HUMAN SERVICES
                                                                                                                                                                                                                                                                                                                                                                                                                                              AAY00924 standard; Protein; 122 AA
                                                                                           Claim 4; Page 82-83; 99pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Immune complex nephritis; therapy
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                    Yao L;
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                                                                                                                                                                                                                                                                          Kaposi's sarcoma (claimed)
                                                                                                                                                                                                                                                                                                                                                 Conservative
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nes 49; Conserva
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                   Pike SE,
                                       WPI; 2000-303767/26
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                    Posato G,
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Best Local S:
Matches 49
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Clq and collectin receptor; cClqR binding domain; complement ubiquitin; CUB functionality; inhibitor; complement activation; inflammation; myocardial infarction; brain ischaemia; gut ischaemia; amyloid plaque; rheumatoid arthritis; systemic lupus erythematosus; Alzheimer's disease; immune complex nephritis; therapy.
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a cClqR binding domain - to modulate complement ubiquitin
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          145 RCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAY00926 standard; Protein; 122 AA
                                                                                                          Claim 9; Page 23; 31pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .ow molecular weight molecule.
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                                   (CUB) functionality
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functionality. The cClqR binding domain, or its inhibitor, can be used to treat a human or animal body. Particularly an inhibitor is used to treat complement activation involved in the initiation and maintenance of inflammation, for example in myocardial infarction, brain ischaemia (Stroke), gut ischaemia, rheumatoid arthritis, systemic lupus eythematosus, burns, immune complex nephritis, and to treat amyloid plaques in Alzheimer's disease. The use of cClqR binding domain or inhibitor enables the CUB domain functionality to be modulated using a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Clq and collectin receptor; cClqR binding domain; complement ubiquitin; CUB functionality; inhibitor; complement activation; inflammation; myocardial infarction; brain ischaemia; gut ischaemia; amyloid plaque; rheumatoid arthritis; systemic lupus erythematosus; Alzheimer's disease; immune complex nephritis; therapy.
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                                                                                                                                                                                                                                                                       0; Indels
                                                                                                                                                                                                                                                                                                         145 RCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                              Mouse cClqR binding domain protein sequence.
                                                                                                                                                                                                                                             100.0%; Pred. nv.
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                                                                                                                                              low molecular weight molecule.
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nes 36; Conservative
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                                                                                                                                                                               Sequence
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low molecular weight molecule.

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA encoding Onchocerca volvulos antigen – used to express recombinant antigen for vaccine against onchocerciasis or river
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                                                                                                                                                                                                                                                                                                                                         River blindness; onchocerciasis; vaccine; antigen; parasite.
                                                       Length 122;
                                                                                  Indels
                                                                                                                                                                                                                                                                                                           Partial sequence of Onchocera volvulus 42 kD antigen.
                                                      ore 19; DB 20; I red. No. 1.1e-12; Mismatches 0;
                                                      10.6%; Score 19; 100.0%; Pred. No.
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/label= repeat unit
/note= "hydrophilic"
177..183
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/note= "hydrophilic"
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/note= "hydrophilic"
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                                                                                                                                                                                                                    AAR12312 standard; Protein; 336 AA.
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100.0%; Fr.
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                                                      Query Match 10.6%
Best Local Similarity 100.0
Matches 19; Conservative
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            122 AA;
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             Seguence
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Region
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                                                                                                                                                                                                      AAR12312
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CC blindness. XX SQ Sequence 3

Sequence 336 AA;

Gaps Query Match
10.6%; Score 19; DB 12; Length 336;
Best Local Similarity 100.0%; Pred. No. 2.6e-12;
Matches 19; Conservative 0; Mismatches 0; Indels 0;

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Search completed: January 14, 2002, 08:50:53 Job time: 124 sec

OM protein

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49
4115
33112
3312
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Synthetic.
AAY92352;
                                                                                                                                                                                                                                                                                                                                                                             AAY92352
RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human vasostatin (
                                                                       (without alignments)
24.038 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Recombinant human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Description
                                                              Search time 83.2 Seconds
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/SIDSB/gcgdata/geneseq/geneseqp/AA1981.DAT:*
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/SIDS8/gcgdata/geneseq/geneseqp/AA1998.
/SIDS8/gcgdata/geneseqp/AA1999.
        4.5
Compugen Ltd
                                                                                                                                                                                   Total number of hits satisfying chosen parameters:
                                                                                                                    CGPGTKKVHVIFNYKGKNVLINKDIRC 27
                                                                                                                                                                  522463 segs, 74073290 residues
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        GenCore version
Copyright (c) 1993 - 2000
                                                              9, 2002, 15:01:12
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Maximum Match 100%
Listing first 45 summaries
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AAY92351
AAY92350
AAW11156
AAP92276
                                             model
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Gapop 10.0 , Gapext 0.5
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                                           protein search, using
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151
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180
400
401
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                                                               January
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Match 1
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151
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B.stearothermophil Bacillus stearothe Bacillus caldotena Bacillus caldotena Bacillus caldotena Bacillus caldotena

AAR28349 AAR45155 AAW35905 AAR28348 AAW22845 AAW22846

Minimum DB Maximum DB

Database

Searched:

Peptide Seq ID No: Cell adhesion reco N-CAM heparin bind Cell adhesion reco

AAY21879 AAY 64 629

AAY09101

Human secreted pro Streptococcus pneu Recombinant P. fur P. furiosus helica Human NCAM 140kD i Arabidopsis thalia Human calreticulin Bacillus caldotena

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AAG47933 AAG30998

AAG24608

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AAG24607 AAG47931 AAG30997

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AAB32385 AAY81727 AAB62032 AAB62033

AAG14742 AAW76265

Arabidopsis thalia

C glutamicum prote Arabidopsis adenyl Arabidopsis adenyl Arabidopsis adenyl

AAG90122 AAR97733

AAW99454

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MBP-calreticulin; maltose binding protein; angiogenesis; inhibition; endothelial cell; anti-angiogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antiinflammatory, hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Inhibiting endothelial cell growth and angiogenesis using calreticulin, useful for suppressing tumor growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Recombinant human calreticulin residues 120-180.
ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (USSH ) US DEPT HEALTH & HUMAN SERVICES
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                                                                                                                                                                                                                                                          AAY92352 standard; Protein; 61
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2000-303767/26
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Recombinant human Recombinant delta-Flea calreticulin Partial sequence o Human MBP-calretic

AAY92349 AAY92354 AAY92355 AAW04171 AAR12312

110087634321

Result è Recombinant human 60 kD Ro (Ro/SSA)

Calreticulin. Calreticulin. þe

The method may

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Gaps

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Indels

Seguence

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Recombinant human MBP-calreticulin comprises the sequence of human calreticulin (see AAY92349) without the 17 N-terminal amino acids. A novel method of inhibiting endothelial cell growth comprises contacting the cells with calreticulin (or its fragments/variants). Fragments of calreticulin causes at least 40% inhibition of angiogenesis, tumor growth and/or endothelial cell growth (claimed) method may be used for inhibiting angiogenesis in a patient. The angiogenesis is associated with a disease other than a tumor that is associated with neovascularization (e.g. diabetic neuropathy, retrolental fibroplasia, trachoma, neovascular glaucoma, psorlasis, angiofibromas,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MBP-calreticulin, maltose binding protein; anglogenesis; inhibition; endothelial cell; anti-anglogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Inhibiting endothelial cell growth and angiogenesis using calreticulin,
tumor growth and/or endothelial cell growth (claimed). The method may used for inhibiting angiogenesis in a patient. The angiogenesis is associated with a disease other than a tumor that is associated with neovascularization (e.g. diabetic neuropathy, retrolental fibroplasia, trachoma, neovascular glaucoma, psoriasis, angiofibromas, immune inflammation, atheroacclerosis, accessive wound repair, retinal neovascularization, macular degeneration, corneal graft rejection, rheumatoid arthritis, systemic lupus erythromatosus, thyroiditis, goodpasture's syndrome, systemic lupus erythromatosus, thyroiditis, syndrome, sarcoidosis and primary biliary cirrhosis). The method may also be used for treating/inhibiting tumor growth especially
                                                                                                                                                                                                                                                                                                                                                                                                                   DB 21; Length 180;
                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; Score 151; DB 21;
100.0%; Pred. No. 9e-16;
Live 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (USSH ) US DEPT HEALTH & HUMAN SERVICES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          suppressing tumor growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Recombinant human MBP-calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 4; Page 80-81; 99pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAY92350 standard; Protein; 400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99WO-US23240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98US-0103438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Yao L;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N-PSDB; AAA09346, AAA09347.
                                                                                                                                                                                                                                                                                                (claimed)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2000-303767/26
                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
les 27; Conserv
                                                                                                                                                                                                                                                                                                                                             180 AA;
                                                                                                                                                                                                                                                                                                Kaposi's sarcoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO200020577-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              05-OCT-1999;
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                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local 9
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A novel method of inhibiting endothelial cell growth comprises
contacting the cells with calreticulin (or its fragments/variants).
Fragments of calreticulin causes at least 40% inhibition of anglogenesis,
tumor growth and/or endothelial cell growth (claimed). The method may be
used for inhibiting anglogenesis in a patient. The anglogenesis is
associated with a disease other than a tumor that is associated with
covereularization (e.g. diabetic neuropathy, retrolental fibroplasia,
trachoma, neovascular glaucoma, psoriasis, anglofibromas, immune
inflammation, atherosclerosis, excessive wound repair, retinal
contact lens overwear, Crohn's disease, non-immune inflammation,
contact lens overwear, Crohn's disease, non-immune inflammation,
contact lens ayetemic lupus erythromatosus, thyroiditis,
doodpusture's syntromic vasculitis, scleroderma, Sjorgen's
systemic vasculitis, systemic vasculitis, scleroderma, Sjorgen's
diso be used for treating/inhibiting tumor growth especially
Kaposi's sarcome (claimed).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Inhibiting endothelial cell growth and angiogenesis using calreticulin,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MRP-calreticulin; maltose binding protein; vasostatin; N-terminal; anglogenesis; inhibition; endothelial cell; anti-anglogenic; entroprotective; artidiabetic; cytostatic; dermalogical; hepatic; immunosuppressive; antilinflammatory; anti-atherosclerotic; gustrointestinal; anti-arthritic; ophthalmic.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 61;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%; Score 151; DB 21;
100.0%; Pred. No. 2.5e-16;
Live 0; Mismatches 0;
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                      Claim 4; Page 82-83; 99pp; English
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAY92351 standard; Protein; 180
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Best Local Similarity
Matches 27; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 AA;
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Synthetic.
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AAY92351;

RESULT

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13-APR-2000

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us-09-828-000-5.rag

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AAP92276 standard; protein; 417 AA.
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                                                                                                                                                                                                                                  22-MAR-1988;
                                                                                23-FEB-1990
                                                                                                                                                                    WO8909273-A
                                                                                                                                                                                          05-OCT-1989,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        27:
                                                                                                                                                 Synthetic.
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                                                                                                                                                                                                                                                                                                                                                                                                                                antigens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                              AAP92276;
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                             AAP92276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAY00927
                  RESULT
                                                     Db
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                                                                                                                                                           ö
neovascularization, atherosclerosis, excessive wound repair, retinal neovascularization, macular degeneration, corneal graft rejection, contact lens overwear, Crohn's disease, non-immune inflammation, freematoid arthritis, systemic lupus erythromatosus, thyroiditis, Goodpasture's syndrome, systemic lupus erythromatosus, thyroiditis, syndrome, sarcoidosis and primary biliary cirrhosis). The method may also be used for treating/inhibiting tumor growth especially Kaposi's sarcoma (claimed).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The present sequence is calreticulin. It and a C-domain derived peptide (AAAW06736) are useful for treating a patient to inhibit restenosis. The calreticulin-type cpds. are administered either parenterally, intravenously or via a catheter and can target areas of vascular damage
                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Inhibition of restenosis in patients – using calreticulin or a C-domain polypeptide of calreticulin or a variant with the same
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0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 401;
                                                                                                                                     Length 400;
                                                                                                                                                         Indels
                                                                                                                                  100.0%; Score 151; DB 21;
ilarity 100.0%; Pred. No. 2.3e-15;
Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 151; DB 18;
Pred. No. 2.3e-15;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                           calreticulin; C-domain; restenosis; inhibitor.
                                                                                                                                                                                                                                                                                                                                                                           Applicat has Pet
                                                                                                                                                                                        1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
                                                                                                                                                                                                                                                        ¥.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        inhibit or prevent restenosis.
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                                                                                                                                                                                                                                                      AAW11156 standard; peptide; 401
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100.0%;
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                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Lucas A, Michalak M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (UYAL-) UNIV ALBERTA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 1997-012036/01.
                                                                                                                                    Query Match
Best Local Similarity
Matches 27; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
Matches 27; Conserv
                                                                                                     400 AA;
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                                                                                                                                                                                                                                                                                                                      Calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                     WO9636643-A1
                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                              17-MAY-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  16-MAY-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           17-MAY-1995;
                                                                                                                                                                                                                                                                                                31-MAY-1997
                                                                                                                                                                                                                                                                                                                                                                                                         21-NOV-1996
                                                                                                     Seguence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     activity.
                                                                                                                                                                                                                                                                           AAW11156;
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                                                                                                                                                                                                                                           AAW11156
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic peptides corresp. to an epitopic core of Ro antigen are expressed recombinantly to detect autoantibodies, for identification of autoimmune diseases. These epitopes are AAs 24-36, 236, 188-209, or 241-255. The peptides may be substd. for ribonucleoprotein particle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                          DNA sequences encoding antigenic epitope(s) of Ro 60 kD autoantigen - used in immunoassays to detect rheumatic disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 417;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; Score 151; DB 10;
100.0%; Pred. No. 2.4e-15;
ive 0; Mismatches 0;
                                     Sjorens syndrome; systemic lupus erythematosus
                                                                                                                                                                                                                                                                                                                          McCauliffe DP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Disclosure, Fig 2; 88pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAY00927 standard; Protein; 417
                                                                                                                                                                                                  89WO-US01213.
                                                                                                                                                                                                                                                                                  (TEXA ) UNIV OF TEXAS SYST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
60 kD Ro (Ro/SSA) antigen.
                                                                                                                                                                                                                                                                                                                          Sontheimer RD, Capra JD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                 WPI; 1989-309537/42.
N-PSDB; AAP92276.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      417 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Calreticulin.
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Gaps

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Indels

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Conservative

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AAY92354 standard; Protein; 60
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                                         Yao L;
                                                                            N-PSDB; AAA09346, AAA09347.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tosato G, Pike SE, Yao L;
                                                                                                                                                                                                                                                                                                                                                     Kaposi's sarcoma (claimed)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10-AUG-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                        27; Conservative
                                        Pike SE,
                                                               WPI; 2000-303767/26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2000-303767/26
                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
                                                                                                                                                                                                                                                                                                                                                                              Sequence 417 AA;
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Synthetic.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAY92354;
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                                         Tosato
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                                                                                                                                                                                                        This sequence is calreticulin, a homologue of Ciq and collectin receptor (CCIqR). The invention relates to the use of a cCiqR binding domain in a medicament to effect complement ubiquitin (CUB) functionality, and an inhibitor of the cCiqR binding domain in a medicament to inhibit can fructionality. The cCiqR binding domain, or its inhibitor, can be used to treat a human or animal body. Particularly an inhibitor is used to complement activation involved in the initiation and maintenance of inflummation, for example in myccardial infarction, brain isohaemia expthematosus, burns, immune complex nephritis, systemic lupus erythematosus, burns, immune complex nephritis, and to treat amyloid plaques in Alzhaimer's disease. The use of cCiqR binding domain or inhibitor enables the CUB domain functionality to be modulated using a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MBP-calreticulin; maltose binding protein; anglogenesis; inhibition; endothelial call; anti-anglogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                               Use of a cClqR binding domain - to modulate complement ubiquitin (CUB) functionality.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                           ; Score 151; DB 20;
; Pred. No. 2.4e-15;
0; Mismatches 0;
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/label~ signal_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18
/label∵ mature_protein
                                                                                                                                                                                     Disclosure; Page 26-27; 31pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAY92349 stundard; Protein; 417 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%;
100.0%;
                                                                                                                                                                                                                                                                                                                                                                ow molecular weight molecule.
                         98WO-GB02430.
                                                 97CB-0016998
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                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 100.0
Matches 27; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human MBP-calreticulin.
                                                                        (UYLE-) UNIV LEICESTER
                                                                                                                         WPI; 1999-180404/15.
                                                                                                                                                                                                                                                                                                                                                                                       417 AA;
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                        12-AUG-1998;
                                                 12-AUG-1997;
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                                                                                                Schwaeble W;
18-FEB-1999
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                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Peptide
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A novel method of inhibiting endothelial cell growth comprises contacting the cells with calreticulin (or its fragments/variants). Fragments of calreticulin causes at least 40% inhibition of anglogenesis, tumor growth and/or endothelial cell growth (claimed). The method may be used for inhibiting anglogenesis in a patient. The anglogenesis is associated with a disease other than a tumor that is associated with neovascularization (e.g. diabetic neuropathy, retrolental fibroplasia, trachoma, neovascular glaucoma, psoriasis, anglofibromas, immune inflammation, atherosclerosis, excessive wound repair, retinal neovascularization, macular degeneration, corneal graft rejection, contact lens overwear. Crohn's disease, non-immune inflammation, rheumatoid arthritis, systemic lupus erythromatosus, thyroiditis,
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                                                                                                                                                                                                                                                                                                     Inhibiting endothelial cell growth and angiogenesis using calreticulin,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Goodpasture's syndrome, systemic vasculitis, scleroderma, Sjorgen's syndrome, sarcoidosis and primary biliary cirrhosis). The method may also be used for treating/inhibiting tumor growth especially
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%; Score 151; DB 21;
100.0%; Pred. No. 2.4e-15;
iive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Recombinant human calreticulin residues 121-180.
(USSH ) US DEPT HEALTH & HUMAN SERVICES
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                                                                                                                                                                                                                                                                                                                                                                                                                               Disclosure; Page 79-80; 99pp; English.
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RESULT 10
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                                                                                                                                                                                                                                                                                                                                                                                          contacting the cells with calreticulin (or its fragments/variants).

Fragments of calreticulin causes at least 40% inhibition of angiogenesis, tumor growth and/or endothelial cell growth (claimed). The method may be used for inhibiting angiogenesis in a patient. The angiogenesis is associated with a disease other than a tumor that is associated with neovascularization (e.g. diabetic neuropathy, retroicherial fibroplasia, trachoma, neovascular glaucoma, propries, angiofibromas, immune inflammation, atherosclerosis, excessive wound repair, retinal neovascularization, macular degeneration, corneal graft rejection, cheumatoid arthritis, systemic lupus erythromatosus, thyroiditis, contact lens overwear, Crohn's disease, non-immune inflammation, rheumatoid arthritis, systemic lupus erythromatosus, thyroiditis, contact measured for treating primary biliary cirrhosis). The method may also be used for treating/inhibiting tumor growth especially kaposi's sarcoma (claimed).
                                                                                                                                                                                                                                                                                                                               ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MBP-calreticulin; maltose binding protein; angiogenesis; inhibition; endothelial cell; anti-angiogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Inhibiting endothelial cell growth and angiogenesis using calreticulin,
         Inhibiting endothelial cell growth and angiogenesis using calreticulin,
                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This sequence comprises recombinant human calreticulin (AAY92350)
                                                                                                                                                                                                                                                                                                                                .;
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                                                                  inhibiting endothelial cell growth comprises
                                                                                                                                                                                                                                                                                                       Score 142; DB 21; Length 60;
Pred. No. 6.4e-15;
Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                              100.0%; Prea. ...
                                                                                                                                                                                                                                                                                                        94.0%; Score 142;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 useful for suppressing tumor growth
                       suppressing tumor growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Recombinant delta-120 calreticulin.
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                                                                                                                                                                                                                                                                                                                                                                                                                                       AAY92355 standard; Protein; 280 AA
                                                                                                                                                                                                                                                                                                                                                     2 GPGTKKVHVIFNYKGKNVLINKDIRC 27
                                           Claim 4; Page 85; 99pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 4; Page 86; 99pp; English
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tosato G, Pike SE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2000-303767/26
                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
Matches 26; Conserv
                                                                  method of
                                                                                                                                                                                                                                                                     60 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200020577-A1
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                       useful for
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                                                                                                                                                                                                                                                                      Sequence
                                                                  A novel
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A novel method of inhibiting endothelial cell growth comprises contacting the cells with calreticulin (or its fragments/variants). Fragments of calreticulin causes at least 40% inhibition of anglogenesis, tumor growth and/or endothelial cell growth (claimed). The method may be used for inhibiting anglogenesis in a patient. The anglogenesis is associated with a disease other than a tumor that is associated with neovascularization (e.g. diabetic neuropathy, retrolental fibroplasia, trachoma, neovascular glaucoma, psortiasis, anglofibromas, immunue inflammation, atherosclerosis, excessive wound repair, retinal neovascularization, macular degeneration, corneal graft rejection,
                                                                                                                                                                                                                                                                                                                                                                                                                       Goodpasture's syndrome, systemic vasculitis, scleroderma, Sjorgen's syndrome, sarcoidosis and primary biliary cirrhosis). The method may also be used for treating/inhibiting tumor growth especially
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Flea calreticulin protein PCtCall589 (AAW04171) is a calcium-binding protein found in the salivary glands of Ctenocephalides felis. Its amino acid sequence was deduced from a cDNA clone (AAT39516) obtd. from a salivary gland cDNA library. Recombinant PCtCall589 can be produced in host cells transformed with a vector carrying calreticulin nucleic acids. Calreticulin alters the blood feeding behaviour of haematophagous insects and can be administered to an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Haematophagous insect calreticulin protein – used to reduce insect infestation and desensitise patients to allergic dermatitis
                                                                                                                                                                                                                                                                                                                                                         contact lens overwear, Crohn's disease, non-immune inflammation, rheumatoid arthritis, systemic lupus erythromatosus, thyroiditis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Calreticulin; flea; haematophagous insect; allergic dermatitis; vaccine; therapy; PCtCal403.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 280;
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Pred. No. 3.9e-14;
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Mismatches
missing the N-terminal 120 amino acids.
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100.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Flea calreticulin PCtCal403.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             95US-0401509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kaposi's sarcoma (claimed)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ctenocephalides felis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Rushlow KE, Stiegler
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 1996-442861/44.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity
Matches 26; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (HESK-) HESKA CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 280 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N-PSDB; AAT39516;
N-PSDB; AAT39517.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            08-MAR-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO9628469-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             09-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12-DEC-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19-SEP-1996.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAW04171;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
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                                                                                                          Gaps
animal to reduce infestation. It reduces calreticulin activity in lasects, so reducing the insect burden on a minal. Calreticulin can be used to elicit an immune response, thereby desensitising an animal to allergic dermatitis caused by fleas, mosquitoes or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The sequence was deduced from a cDNA clone lambda RAL-1 prepd. from RNA isolated from nodules excised from patients infected with O. volvulus. The N-terminal is incomplete, however Abs which specifically bind to protein prepd. from induced cultures of lumbda RAL-1 lysogens recognise a single polypeptide of mol. wt. 42.000 in extracts of adult worms. Analysis deduced sequence suggests that it encodes a protein of mol. wt. 39.130. If the unities is not subject to post-translational processing this suggests that most of the coding sequence is present. The three
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA encoding Onchocerca volvulos antigen – used to express recombinant antigen for vaccine against onchocerciasis or river
                                                                                                         ö
                                                                                   Score 139; DB 17; Length 403;
Pred. No. 1.7e-13;
1; Mismatches 1; Indels (
                                                                                                                                                                                                                                                                       River blindness; onchocerclasis; vaccine; antigen; parasite.
                                                                                                                                                                                                                                                    Partial sequence of Onchocera volvulus 42 kD antigen.
                                                                                                                                                                                                                                                                                                                                                                     /note- "hydrophilic"
195..201
/label- repeat unit
/note- "hydrophilic"
                                                                                                                                     /label- repeat unit
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                                                                                                                          1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                           AAR12312 standurd; Protein; 336 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Disclosure; Fig 7; 20pp; English.
                                                                                    92.18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        88US-0214264.
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                                                                                                                                                                                                                                  (first entry)
                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                 ..183
                                                                                                                                                                                                                                                                                                                      160..166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Greene BM, Unnasch TR;
                                                                                                                                                                                                                                                                                                                                          /note
177 .1
                                                                                                                                                                                                                                                                                          Onchocerca volvulus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1991-185179/25.
                                                                                    Query Match
Hent Local Similarity
Matches 25; Conserv
                                                        403 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N-PSDB; AAQ11987.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       30-JUN-1988;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30-JUN-1988;
                                                                                                                                                                                                                                  29-AUG-1991
                                                                                                                                                                                                                                                                                                                                                                                                                 USS021342-A.
                                      Culicoides.
                                                                                                                                                                                                                                                                                                                                                                                                                                    04-JUN-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 blindness.
                                                         Seguence
                                                                                                                                                                                                               AAR12312;
                                                                                                                                                                                                                                                                                                                                                                             Region
                                                                                                                                                                                                                                                                                                                      Region
                                                                                                                                                                                                                                                                                                                                                   Region
                                                                                                                                                                          RESULT 11
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MBP-calreticulin; maltose binding protein; angiogenesis; inhibition; endothelial cell; anti-angiogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-atthritic; ophthalmic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            endothelial cell growth and angiogenesis using calreticulin, suppressing tumor growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           neovascularization (e.g. diabetic neuropathy, retrolental fibroplasia, trachoma, neovascular glaucoma, psoriasis, angiofibromas, immune inflammation, atherosclerosis, excessive wound repair, retinal neovascularization, ameular degeneration, corneal graft rejection, contact lens overwear, Crohn's disease, non-immune inflammation, rheumatoid arthritis, systemic lupus erythromatosus, thyroiditis, codpasture's syndrome, systemic vasculitis, scleroderma, Sjorgen's syndrome, sarcoidosis and primary billary cirrhosis). The method may also be used for treating/inhibiting tumor growth especially
                                                                                                                                                                                                                                                                                                                                                                                    Gaps
repeats are highly hydrophillic regions likely to be exposed on the surface of the antigen and highly immunogenic. Recombinant antigen expressed by the clone can be used stimulate T-cells of individuals infected by the parasite to proliferate and may be used as the basis for a vaccine against Onchocerciasis or river
                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                 Length 336;
                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                 Score 121; DB 12;
Pred. No. 9.2e-11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Recombinant human calreticulin residues 132-180.
                                                                                                                                                                                                                                                                                                  (USSH ) US DEPT HEALTH & HUMAN SERVICES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 4; Page 82-83; 99pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAY92353 standard; Protein; 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99WO-US23240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98US-0103438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Yao L;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10-AUG-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                       Local Similarity 77.8 nes 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pike SE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2000-303767/26
                                                                                                                                                                                                                         336 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200020577-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                06-OCT-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       05-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Inhibiting useful for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tosato G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Synthetic.
                                                                                                                                                             blindness
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAY92353;
                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                     Query Match
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Matches
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Sequence

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AAB66341;

RESULT 13

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The present invention provides the protein and coding sequences for the castor bean calreticulin protein and the calreticulin promoter sequence. In addition, the castor bean calnexin protein, coding sequence and promoter are also described. Calreticulin and calnexin are calcium binding proteins found in the endoplasmic reticulum (er). The calreticulin promoter sequence can be used in vectors to promote the expression of foreign genes, particularly resistance genes, in plant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Protein identification; signal transduction pathway; metabolic pathway; hybridisation assay; genetic mapping; gene expression control; promoter; termination sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                New nucleic acid molecules encoding a calcium binding chaperone protein in endoplasmic reticulum, calreticulin, and calreticulin promoter sequences, useful for producing foreign gene products in plant cells \cdot
                                                                                                    calcium binding; er; endoplasmic reticulum;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 82; DB 22; Length 41
Pred. No. 0.00015;
2: Mismatches 10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Arabidopsis thaliana protein fragment SEQ ID NO: 28351.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Disclosure; Fig 1B; 45pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2,
                                                                                                                                                                                                                                                                                                                             (PION-) PIONEER HI-BRED INT INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAG24609 standard; Protein; 312
                                                                                                    Castor bean; calreticulin; calc calnexin; promoter; resistance.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     54.3%;
55.6%;
                                                                                                                                                                                                                                                                                            96US-0675816.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                    Castor bean calreticulin.
                                                                                                                                                                                                                                                                                                                                                                 Coughlan SJ, Winfrey RJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Arabidopsis thaliana.
                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2001-122335/13.
N-PSDB; AAF29755.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  415 AA;
                                                                                                                                                     Ricinus communis.
                                                                                                                                                                                       US6171864-B1.
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                                                                                                                                                                                                                                                                                            05-JUL-1996;
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                                  05-APR-2001
                                                                                                                                                                                                                        09-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAG24609;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
 AAB66343;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
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Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The present invention provides the protein and coding sequences for the castor bean calreticulin protein and the calreticulin promoter sequence. In addition, the castor bean calnexin protein, coding sequence and promoter are also described. Calreticulin and calnexin are calcium binding proteins found in the endoplasmic reticulum (er). The calreticulin promoter sequence can be used in vectors to promote the expression of foreign genes, particularly resistance genes, in plant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New nucleic acid molecules encoding a calcium binding chaperone protein in endoplasmic reticulum, calreticulin, and calreticulin promoter sequences, useful for producing foreign gene products in plant cells -
                                                                                                                                                                                                                                                                                                                                                                              calreticulin; calcium binding; er; endoplasmic reticulum;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                    Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               54.3%; Score 82; DB 22; Length 415; 55.6%; Pred. No. 0.00015; ive 2; Mismatches 10; Indels
                                                  Length 49;
                                                54.3%; Score 82; DB 21; Length 49
100.0%; Pred. No. 1.2e-05;
ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                             Castor bean calreticulin SEQ ID NO: 2.
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                                                                                                                                                                                                                                        AAB66341 standard; Protein; 415 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (PION-) PIONEER HI-BRED INT INC
                                                                                                                                                                                                                                                                                                                                                                                                calnexin; promoter; resistance
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 1; Fig 3; 45pp; English.
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N-PSDB; AAF29741, AAF29742.
                                                                                                                                                                                                                                                                                                         (first entry)
                                              Query Match
Best Local Similarity 100.
Matches 15; Conservative
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                                                                                                                                     13 NYKGKNVLINKDIRC 27
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Best Local Similarity
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 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                  Ricinus communis
49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US6171864-B1.
                                                                                                                                                                                                                                                                                                                                                                                 Castor bean;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         05-JUL-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           05-JUL-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Coughlan SJ,
                                                                                                                                                                                                                                                                                                           05-APR-2001
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Gaps

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06-SEP-2000.

AAB66343 standard; Protein; 415 AA.

Sequence

Matches

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Length 415;

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Query Match 52.3%; Score 79; DB 21; Length 312; Best Local Similarity 55.6%; Pred. No. 0.00032; Matches 15; Conservative 1; Mismatches 11; Indels
990x - 0156458

990x - 0156596

990x - 0157117

990x - 0157823

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Gaps

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Search completed: January 9, 2002, 15:01:13 Job time: 159 sec

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GenCore version
Copyright (c) 1993 - 2000
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protein search, using sw model ŧ OM protein

9, 2002, 14:58:34; January Run on:

Search time 83.2 Seconds (without alignments)
160.255 Million cell updates/sec

US-09-828-000-3

971 1 EPAVYFKEQFLDGDGWTSRW......PDNTYEVKIDNSQVESGSLE 180 Perfect score: Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

522463 seqs, 74073290 residues

522463 Total number of hits satisfying chosen parameters:

length: 0 length: 2000000000 DB DB Minimum I Maximum I Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database

A_Geneseq_1101:*

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Description	Human vasostatin (Recombinant human	60 kD Ro (Ro/SSA)	Human MBP-calretic	Calreticulin. Hom	Calreticulin. Hom	Flea calreticulin	Human secreted pro	Partial sequence o	Castor bean calret	Castor bean calret
ID	AAY92351	AAY92350	AAP92276	AAY92349	AAY00927	AAW11156	AAW04171	AAB32385	AAR12312	AAB66341	AAB66343
	21	21	10	21	20	18	17	21	12	22	22
Query Match Length DB	180	400	417	417	417	401	403	385	336	415	415
Query	100.0	100.0	100.0	100.0	99.5	94.9	72.1	65.0	55.8	54.3	54.3
Score	971	971	971	971	996	921	700	631	541.5	527	527
Result No.	1	7	m	4	S	9	7	80	6	10	11

Arabidopsis thalla	Arabidopsis thalia	Arabidopsis thalia	Arabidopsis thalia	Arabidopsis thalia	is	nt.	Recombinant human	Recombinant delta-	A. thaliana enviro	Calnexin sequence.	Recombinant human	S	Ø	Arabidopsis thalia	Zea mays protein f	Arabidopsis thalia	ທ	Arabidopsis thalia	c	Arabidopsis thalia	Arabidopsis thalia	Human cClgR bindin	Rat cClqR binding		Arabidopsis thalia	Arabidopsis thalia	Human Endoplasmic	Human prostate can	Human secreted pro	red	s tha	Arabidopsis thalia	% mays protein f
AAG24608	AAG47932	AAG24607	AAG47931	AAG30997	AAG30996	AAY92352	AAY92354	AAY92355	AAY77953	AAR71094	AAY92353	AAG24609	AAG47933	AAG30998	AAG41018	AAG26284	AAG46611	AAG46610	AAB66342	AAG04448	AAG04447	AAY 00924	AAY00926	AAY00925	AAG34014	AAG34013	AAB99168	AAB56468	AAG00147	AAG00148	AAG26285	AAG46612	AAG25999
21	21	21	21	21	21	21	21	21	21	16	21	21	21	21	21	21	21	21	22	21	21	20	20	20	21	21	22	21	21	21	21	21	21
421	421	424	2	441	444	61	9	280	417	593	49	312	312	332	84	530	530	267	542	532	548	122	122	122	91	66	256	221	162	162	394	394	125
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ALIGNMENTS

AAY92351 standard; Protein; 180 AA AAY92351 RESULT

AAY92351;

(first entry) 10-AUG-2000

Human vasostatin (calreticulin N-terminal 180 amino acids).

MBP-calreticulin, maltose binding protein; vasostatin; N-terminal; angiogenesis; inhibition; endothelial cell; anti-angiogenic; neuroprotective; artidiabetic; cytostatic; dermalogical; hepatic; immunosuppressive; antidiaflammatory; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.

Homo sapiens. Synthetic.

WO200020577-A1.

13-APR-2000.

99WO-US23240 05-OCT-1999;

98US-0103438 06-OCT-1998;

SERVICES (USSH) US DEPT HEALTH & HUMAN

Yao L; Tosato G, Pike SE,

WPI; 2000-303767/26

Inhibiting endothelial cell growth and angiogenesis using calreticulin,

us-09-828-000-3.rag

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   contacting the cells with calceticulin (or its fragments/variants).

Fragments of calcuticulin causes at least 40% inhibition of angiogenesis, two growth and/or endothelial cell growth (claimed). The method may be tweed for inhibiting angiogenesis in a patient. The angiogenesis, two disease other than a tumor that is associated with necowacciariation (e.g. diabetic neuropathy, retrolental fibroplasia, trachoma, neovascular glaucoma, psoriasis, andiodifficental fibroplasia, trachoma, neovascular glaucoma, psoriasis, andiodifficental fibroplasia, contact lens averaged, crontact lens overweur, Crohn's disease, non-immune inflammation, contact lens averweur, crohn's disease, non-immune inflammation, sandrome, systemic vusculitis, scleroderma, Sjorgen's syndrome, sarcoidosia and primary biliary cirrhosis). The method may calso be used for treating/inhibiting tumor growth especially
                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MMP-calreticulin; maltose binding protein; angiogenesis; inhibition; endothelial call; anti-angiogenic; neuroprotective; antidiabetic; cytoutatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
                                                                                                                                                                                                                                                                                                                                                                                                                         SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                            121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
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                                                                                                                                                                                                                                                                                                                                    ;
0
                                                novel method of inhibiting endothelial cell growth comprises
                                                                                                                                                                                                                                                                                                           Length 180;
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; Pred. No. 3.1e-99;
0; Mismatches 0;
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 useful for auppressing tumor growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Recombinant human MBP-calreticulin.
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                       Claim 4; Page 82; 99pp; English
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100.0%;
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N-PSDB; AAA09346; AAA09347;
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Matches 180; Conservative
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Recombinant human MBP-calreticulin comprises the sequence of human calreticulin (see AAY92349) without the 17 N-terminal anno acids. A novel method of Inhibiting endothelial cell growth comprises contacting the cells with calreticulin (or its fragments/variants). Fragments of calreticulin causes at least 40% inhibition of anglogenesis, tunner growth and/or endothelial cell growth claimed). The method may be used for inhibiting anglogenesis in a patient. The anglogenesis is associated with a disease other than a tunor that is associated with neovascularization (e.g. diabetic neuropathy, retrolental fibroplasis, trachoma, neovascular glaucoma, psoriasis, anglofibromas, neovascularization, macular degeneration, corneal graft rejection, neovascularization, corneal graft rejection,
Inhibiting endothelial cell growth and angiogenesis using calreticulin, useful for suppressing tumor growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           contact lens overweer, Crohn's disease, non-immune inflammation, rheumatoid arthritis, systemic lupus erythromatosus, thyroiditis, Goodpasture's syndrome, systemic vasculitis, scleroderma, Sjorgen's syndrome, sarcoidosis and primary biliary cirrhosis). The method may also be used for treating/inhibiting tumor growth especially
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
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100.0%; Pred. No. 9.4e-99;
cive 0; Mismatches 0;
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                                                                                           Claim 4; Page 80-81; 99pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              22-MAR-1989;
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Best Local Sin
Matches 180;
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                                                                                                                                                          Sequence
                                                                                                                                                                                   Query Match
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CUB
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                                          Synthetic peptides corresp. to an epitopic core of Ro antigen are expressed recombinantly to detect autoantibodies, for identification of autoimmune diseases. These epitopes are AAs 24-36, 23-36, 188-209, or 241-255. The peptides may be substd. for ribonucleoprotein particle
                                                                                                                                                                                                                                                                                                                                                           MBP-calreticulin; maltose binding protein; angiogenesis; inhibition; endochelial cell; anti-angiogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            endothelial cell growth and angiogenesis using calreticulin,
                                                                                                                                                                                          121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                  18 epavyfkeqfldgdgwtsrwieskhksdfgkfvlssgkfygdeekdkglqtsqdarfyal 77
                                                                                                                                                         1 EPAVYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
sequences encoding antigenic epitope(s) of Ro 60 kD autoantigen sed in immunoassays to detect rheumatic disease
                                                                                                                                         ö
                                                                                                                       Length 417;
                                                                                                                                         Indels
                                                                                                                     Score 971; DB 10;
Pred. No. 9.9e-99;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SERVICES
                                                                                                                                                                                                                                                                                                                                                                                                                                 1..17
/label= signal_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                         /label = mature_protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure; Page 79-80; 99pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      suppressing tumor growth
                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                          A'A
                          Disclosure; Fig 2; 88pp; English.
                                                                                                                                                                                                                                                                                         AAY92349 standard; Protein; 417
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                                                                                                                      100.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N-PSDB; AAA09346, AAA09347.
                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                            Human MBP-calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2000-303767/26
                                                                                                                               Similarity
                                                                                             417 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200020577-A1
                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             05-OCT-1999;
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                                                                                                                                                                                                                                                                                                                          10-AUG-2000
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                                                                                                                                        180;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Inhibiting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     useful for
                                                                                              Sequence
                                                                                                                                                                                                                                                                                                         AAY92349;
                                                                                                                      Query Match
                                                                             antigens
                                                                                                                                                                                                                                                                                                                                                                                                                               Peptide
                                                                                                                                 Local
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Matches
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A novel method of inhibiting endothelial cell growth comprises
contacting the cells with calreticulin (or its fragments/variants).
Fragments of calreticulin causes at least 40% inhibition of anglogenesis,
tumor growth and/or endothelial cell growth (claimed). The method may be
used for inhibiting anglogenesis in a patient. The anglogenesis is
associated with a disease other than a tumor that is associated with
neovascularization (e.g. diabetic neuropathy, retrolental fibroplasia,
trachoma, neovascular glaucoma, psoriasis, angiofibromas, immmune
information, atheroscalerosis, excessive wound repair, retinal
neovascularization, macular degeneration, corneal graft rejection,
contact lens overwear, Crohn's disease, non-immune inflammation,
rheumatoid arthritis, systemic lupus erythromatcosus, thyroiditis,
doodpasture's syndrome, systemic vasculitis, scleroderma, Sjorgen's
syndrome, sarcoidosis and primary biliary cirrhosis). The method may
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    and collectin receptor; cClqR binding domain; complement ubiquitin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18 epavyfkeqfldgdgwtsrwieskhksdfgkfvlssgkfygdeekdkglqtsqdarfyal 77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 EPAVYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%; Score 971; DB 21; Length 417; 100.0%; Pred. No. 9.9e-99; tive 0; Mismatches 0; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ΑA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAY00927 standard; Protein; 417
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Kaposi's sarcoma (claimed).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LEICESTER
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          417 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Calreticulin,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (UYLE-) UNIV
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AAW04171;
                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                             vaccine;
                                                                           Query Match
                                                                                                                                                                                                                                                                      AAW04171
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                This sequence is calreticulin, a homologue of Clq and collectin receptor (cClqR). The invention relates to the use of a cClqR binding domain in a madicament to effect complement ubiquitin (CUB) functionality, and an inhibitor of the cClqR binding domain in a medicament to inhibit CUB tunctionality. The cClqR binding domain in a medicament to inhibit CUB tunctionality. The cClqR binding domain, or its inhibitor, can be used to complement activation involved in the initiation and maintenance of inflummation, for example in mycardial infarction, brain ischaemia (HITOKO), gut ischaemia, rheumatoid arthritis, systemic lupus erythemategus, burns, immune complex nephritis, and to treat amyloid plagues in Alzhaimar's disease. The use of cClqR binding domain or inhibitor enables the CUB domain functionality to be modulated using a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The prenent sequence is calreticulin. It and a C-domain derived poptide (AAW06736) are useful for treating a patient to inhibit restenosis. The
                                                                                                                                                                                                                                                                                         61 SASFEPFSNKGOTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                           1 EPAVYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
                                                                                                                                                                                                                                                                                                                                 121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Inhibition of restenosis in patients – using calreticulin or a C-domain polypeptide of calreticulin or a variant with the same
                                                                                                                                                                                                                          ö
                                                                                                                                                                                                     Length 417;
                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                    Score 966; DB 20;
Pred. No. 3.5e-98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C-domain; restenosis; inhibitor.
                                                                                                                                                                                                                         0; Mismatches
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Disclosure; Page 26-27; 31pp; English.
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                                                                                                                                                   low molecular weight molecule.
                                                                                                                                                                                                    Query Match
Bost Local Similarity 99.4%;
Matches 179; Conservative
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95US-0442844
                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Michalak M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (UYAL-) UNIV ALBERTA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1997-012036/01.
                                                                                                                                                                      417 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           calreticulin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Calreticulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     W09636643-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17-MAY-1996;
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17-MAY-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   31-MAY-1997
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                                                                                                                                                                      Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       activity
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calreticulin-type cpds. are administered either parenterally, intravenously or via a catheter and can target areas of vascular damage to inhibit or prevent restenosis.
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                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                              1 EPAVYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Flea calreticulin protein PCtCal1589 (AAW04171) is a calcium-binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein found in the salivary glands of Ctenocephalides felis.

Its amino acid sequence was deduced from a cDNA clone (AAT39516) obtd. from a salivary gland cDNA library. Recombinant PCtCal1589 can be produced in host cells transformed with a vector carrying behaviour of haematchphaqous insects and can be administered to an animal to reduce infestation. It reduces calreticulin activity in insects, so reducing the insect burden on an animal. Calreticulin activity in animal to reduce infestation. It reduces the constitution is animal. Calreticulin activity in animal to a least to end immune response, thereby desensitising an cullicoides.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Haematophagous insect calreticulin protein - used to reduce insect infestation and desensitise patients to allergic dermatitis
                                                                                                                                                                                                                                                                                                                                                 Calreticulin; flea; hacmatophagous insect; allergic dermatitis;
                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                 Score 921; DB 18;
Pred. No. 3.1e-93;
; Mismatches 8;
                                                                                                                                                                                                                                                         1; Mismatches
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                                                                                                                                                                                                 94.9%;
95.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             therapy; PCtCal403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 95US-0401509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                               Best Local Similarity 95.0 Matches 171; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ctenocephalides felis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 1996-442861/44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (HESK-) HESKA CORP.
                                                                                                                  401 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N-PSDB; AAT39516;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N-PSDB; AAT39517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12-DEC-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          08-MAR-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              09-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO9628469-A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The polynucleotide sequences given in AAC55190 to AAC55235 encode the human secreted proteins given in AAB32371 to AAB32484. Human secreted proteins have activities based on the tissues and cells the genes are expressed in Examples of activities include: cytostatic; immunostimulant; antiproliferative; cariant; antiant; antiparasitic; neuroprotective; nootropic; antiinflammatory; antiangiogenic; anti-HIV; and antianteriosclerotic. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human; secreted protein; cytostatic; immunostimulant; antiproliferative; cardiant; antiarrhythmic; antiviral; antibacterial; antifungal; cancer; antiparsitic; neuroprotective; noctropic; antifilammancry; anti-HIV; antiangiogenic; antiarteriosclerotic; diagnosis; immune discorder; AIDS; autoimmune disease; haematopoietic cell disorder; blood protein disorder; adammaglobulinaemia; hyperproliferative disease; Gaucher's disease; cardiovascular disorder; congenital heart defect; pulmonary atresia; arrhythmia; ischaemia; andiogenesis related disorder; Crohn's disease; atherosclerosis; neurological disease; Alzheimer's disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New human nucleic acids encoding secreted proteins, useful in the treatment, prevention or diagnosis of immune disorders (e.g. autoimmune diseases), blood protein disorders and hyperproliferative diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Moore PA;
                                                                                                                                                                               SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                                                                                                                                                                                                 121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                 Gaps
                                                                                                            2 PAVYFKEQFLDGDGWTSRWIESKHK-SDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
                                                                                                                                 Human secreted protein sequence encoded by gene 15 SEQ ID NO:71.
                                                                               2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Young PE, Ni J, Soppet DR, Florence KA, Komatsoulis G;
                                              Length 403;
                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Huntington's; infectious disease; cat-scratch disease
                                                                               26;
                                            72.1%; Score 700; DB 17; 71.7%; Pred. No. 7.8e-69; 1ve 23; Mismatches 26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 11; Page 434-435; 488pp; English.
                                                                                                                                                                                                                                                                                                                                                                  AAB32385 standard; Protein; 385 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ebner R,
Olsen HS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (HUMA-) HUMAN GENOME SCI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  08-FEB-2000; 2000WO-US03062.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99US-0119468
                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                            Query Match
Best Local Similarity 71.7
Matches 129; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (e.g. Gaucher's disease)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ruben SM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2000-543578/49.
N-PSDB; AAC55204.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Lafleur DW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200047602-A1.
403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10-FEB-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                      16-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                17-AUG-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CA,
                                                                                                                                                                                                                                                                                                                                                                                                    AAB32385;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Shi Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Rosen
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polynucleotides and polypeptides, or their agonists and antagonists, can be used for treating, preventing or diagnosing immune diseases. Gig cancer, autoimmune diseases), disorders of haematopoietic cells, blood protein disorders (e.g. agammaglobulinaemia), hyperproliferative diseases (e.g. Gaucher's disease), cardiovascular disorders (e.g. congenital heart defects, pulmonary atreasis, arrhythmias, ischaemia), angiogenesis related disorders (e.g. Crohn's disease, atherosclerosis), infectious diseases (e.g. Alzheimer's disease, Huntington's chorea), infectious diseases (e.g. AIDS, cat-scratch disease and other bacterial, viral, parasitic or fungal diseases). AAC55181 to AAC55189 and AAB32370 represent sequences used in the exemplification of the present
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICGPG 123
                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4 VYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYALSAS 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        124 TKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ;
0
                                                                                                                                                                                                                                                                                                                                                             Length 385;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   River blindness; onchocerciasis; vaccine; antigen; parasite.
                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Partial sequence of Onchocera volvulus 42 kD antigen.
                                                                                                                                                                                                                                                                                                                                                                                                          33;
                                                                                                                                                                                                                                                                                                                                                      Score 631; DB 21;
Pred. No. 3e-61;
                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /label= repeat unit
/note= "hydrophilic"
195..201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                160..166
/label= repeat unit
/note= "hydrophilic"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /label= repeat unit
/note= "hydrophilic"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAR12312 standard; Protein; 336 AA.
                                                                                                                                                                                                                                                                                                                                                                                                        30;
                                                                                                                                                                                                                                                                                                                                                                65.0%;
                                                                                                                                                                                                                                                                                                                                                                                     64.48;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             88US-0214264
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            29-AUG-1991 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    195..201
/label= re
                                                                                                                                                                                                                                                                                                                                                                                                             Matches 114; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ..183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unnasch TR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Onchocerca volvulus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 1991-185179/25.
N-PSDB; AAQ11987.
                                                                                                                                                                                                                                                                                                                                                                                     Sest Local Similarity
                                                                                                                                                                                                                                                                                                385 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VINU (-OHYU)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30-JUN-1988;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30-JUN-1988;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US5021342-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                04-JUN-1991.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Greene BM,
                                                                                                                                                                                                                                                     invention
                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                             Query Match
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Region
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Disclosure; Fig 1B; 45pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                           AAB66343 standard; Protein; 415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 calnexin; promoter; resistance
                                    Claim 1; Fig 3; 45pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            96US-0675816.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      bean; calreticulin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                           99; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Castor bean calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Coughlan SJ, Winfrey RJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2001-122335/13.
N-PSDB; AAF29755.
                                                                                                                                                                                                                 Local Similarity
                                                                                                                                                                   415 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ricinus communis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          05-JUL-1996;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAB66343;
                                                                                                                                                                   Sequence
                                                                                                                                                                                                     Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 11
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                                                                                                                                                                                                                                                                                              61
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Castor bean; calreticulin; calcium binding; er; endoplasmic reticulum;
                                                                 The sequence was deduced from a cDNA clone lambda RAL-1 prepd.

from NAM isolated from nodules excised from pattents infected
with O. volvulus. The N-terminal is incomplete, however Abs
with Specifically bind to protein prepd. From induced cultures
of lambda RAL-1 lysogens recognise a single polypeptide of mol.
wt. 42.000 in extracts of adult worms. Analysis deduced sequence
unquents that it encodes a protein of mol. wt. 39,130. If the
antiqen is not subject to post-translational processing this
antiqen is not subject to post-translational processing this
surface of the antigen and highly immunogenic. Recombinant
the surface of the antigen and highly immunogenic. Recombinant
antique expressed by the clone can be used stimulate T-cells of
individuals infected by the parasite to proliferate and may be
used as the basis for a vaccine against Onchocerciasis or river
                                                                                                                                                                                                                                                                                                                                                                                                   98 NSLINGTDMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTL 157
                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                          97
                                                                                                                                                                                                                                                                                                                                                     39 FYGDEEKDKGLQTSQDARFYALSASFE-PFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFP
NAA encoding Onchocerca volvulos antigen - used to express recombinant antigen for vaccine against onchocerciasis or river
                                                                                                                                                                                                                                                                                                                     ï
                                                                                                                                                                                                                                                                                              Length 336;
                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                              DB 12;
                                                                                                                                                                                                                                                                                   55.8%; Score 541,5; DB 12; 68.5%; Pred. No. 1.9e-51; Mismatches 23;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Castor bean calreticulin SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                             Disclosure; Fig 7; 20pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                 158 IVRPUNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAH66341 standard; Protein; 415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (PION-) PIONEER HI-BRED INT INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          calnexin; promoter; resistance.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                   Conservative
 DNA encoding Onchocerca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Coughlan SJ, Winfrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2001-122335/13.
                                                                                                                                                                                                                                                                                                    Local Similarity
es 98; Conserv
                                                                                                                                                                                                                                                          336 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ricinus communis.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  05-JUL-1996;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           09-JAN-2001.
                        blindness.
                                                                                                                                                                                                                                     blindness.
                                                                                                                                                                                                                                                                                            Query Match
Hest Local S:
Matches 98;
                                                                                                                                                                                                                                                            Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The present invention provides the protein and coding sequences for the castor bean calreticulin protein and the calreticulin promoter sequence. In addition, the castor bean calnexin protein, coding sequence and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New nucleic acid molecules encoding a calcium binding chaperone protein in endoplasmic reticulum, calreticulin, and calreticulin promoter sequences, useful for producing foreign gene products in plant cells \cdot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              calcium binding; er; endoplasmic reticulum;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
in endoplasmic reticulum, calreticulin, and calreticulin promoter sequences, useful for producing foreign gene products in plant cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4 VYFKEQFLIXGDGWTSRWIESKHKSD---FGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSL 179
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      54.3%; Score 527; DB 22; 55.3%; Pred. No. 1e-49;
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                                                                                                                                             61 SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                                                                                                                                                       promoter are also described. Calreticulin and calnexin are calcium binding proteins found in the andoplasmic retriculum (er). The calreticulin promoter sequence can be used in vectors to promote the expression of foreign genes, particularly resistance genes, in plant
                                                                                             Gaps
                                                                                                                      4 VYFKEQFLDGDGWTSRWIESKHKSD---FGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
                                                                                                                                                                               121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSL 179
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                                                                         54.3%; Score 527; DB 22; Length 415; 55.3%; Pred. No. 1e-49; 1ive 31; Mismatches 43; Indels
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53.9%; Pred. No. 7.8e-48;
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                                                                                                                                                                                                                   CGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSL 179
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                                                                                                          Length 424;
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                                                                                                         52.5%; Score 510; DB 21; 53.9%; Pred. No. 7.8e-48;
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990S-0160989.
990S-0161404.
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22-0CT-1999;
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990S-0160981.
990S-0161404.
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86.0%; Score 835; DB 13; 83.9%; Pred. No. 2.7e-71;

Query Match 86.C Best Local Similarity 83.9 Matches 151; Conservative

15; Mismatches

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Best_Local Similarity 85.2
Matches 144; Conservative
 Xenopodinae; Xenopus
                                     SEQUENCE FROM N.A.
                                                           MEDLINE: 93074997;
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              NCBI_TaxID=8355
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Eukaryota; Metazoa; Mollusca; Gastropoda; Opisthobranchia; Anaspidea;
Aplyaidae; Aplysia.
NCBI_TaxID-6500;
                                               SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                                                          121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                         133 GPPTKKVHVIEQYKKKNIQINKDIRCKDDSFTHLYTLIVRPDNTYEVKIDNSKVESGSLE 192
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                                                                                                                                                                                                                                                                                                                           Kennedy T.E., Kuhl D., Barzilai A., Sweatt J.D., Kandel E.R.;
"Long-term sensitization training in Aplysia leads to an increase
calreticulin, a major presynaptic calcium-binding protein.";
Nucron 9:1013-1024(1992).
NHBL; S51239; AAB24569.;
InterPro; IPR000886; ER_target.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-JAN-1998 (TrEMBLrel. 05, Created)
01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
01-JON-2001 (TrEMBLrel. 17, Last annotation update)
CALRETICULIN (FRAGMENT).
Xenopus laevis (African clawed frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibiu; Butrachia; Anura; Mesobatrachia; Pipoldea; Pipidae;
EPAVYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL
           1 RPAVYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL
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01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
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Best Local Similarity 79.4%; Pred. No. 2.3e-68;
Matches 143; Conservative 18; Mismatches 17,
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PRODOM; PD001866; CALRETICULIN, 1.
PROSITE; PS00804; CALRETICULIN_1, 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
PROSITE; PS0004; ER_TARETICULIN_REPEAT; 3.
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Ranidae; Rana.
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MEDLINE 96234004; PubMed=8654561;
Yamamoto S., Nakamura M.;
"Calnexin: its molecular cloning and expression in the liver of
                        Treves S., Zorzato F., Pozzan T.; "Identification of calreticulin isoforms in the central nervous
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Amphibia; Batrachia; Anura; Neobatrachia; Ranoidea;
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Last annotation update)
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85.2%; Pred. No. 8.7e-68;
ive 12; Mismatches 13;
                        Biochem. J. 287:579-581(1992).

BR EMBL. X67989. CAA47867.1;

DR PRINTS. PROG1580; CALRETICULIN.

PROMITS: PROG0626; CALRETICULIN.

DR PROSTE; PSO0803; CALRETICULIN.

DR PROSTE; PSO0804; CALRETICULIN.

PROSTE; PSO0804; CALRETICULIN.

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PRINTS; PR00626; CALRETICULIN.
PRODOM; PD001866; Calreticulin; 1.
PROSITE; PS00803; CALRETICULIN; 1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
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BMBL; D78889; BAA1425.1; -.
InterPro; IPR000886; ER_target.
InterPro; IPR001580; CalretLoulin.
PubMed-1445218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-FEB-1997 (TrEMBLrel. 02, 01-FEB-1997 (TrEMBLrel. 02, 01-JUN-2001 (TrEMBLrel. 17,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                frog, Rana rugosa.";
FEBS Lett. 387:27-32(1996)
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410 AA

PRT;

PRELIMINARY;

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D.C.;
                                                        CALRETICULIN.
                                   01-JAN-1999
01-JUN-2001
                      01-NOV-1996
                                                                                                                                                                                                                                                   Jaworski
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       089060
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Q906S0
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                                                                                                                                              61 SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                                                                                                                                                           121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                      139 GPPTKKVHVIFNYKGKNLQINKDIRSKADVYSHLYTLIVRPDNTYEVKIDNSKVESGNLE 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              64 FEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICGPG 123
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11 VYFKEQFLDGDGWKSRWVESKHKSDYGQWKLTSGKFYGDPELDKGLQTSQDARFYALSSR 80
                                                                                                  1 EPAVYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4 VYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYALSAS 63
                                                                                                                                                                                                                                                                                                                             CALRETICULIN.

Brachydanlo rerio (Zebrafish) (Zebra danio).

Brachydanlo rerio (Zebrafish) (Zebra danio).

Brachydanlo rerio (Zebrafish) (Zebra danio).

Actinopterygii: Neopterygii: Teleostei: Euteleostei: Ostariophysi;
Cypriniformes; Cyprinidae; Rasborinae; Danio.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    124 TKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 80.8%; Score 785; DB 13; Length 417; Best Local Similarity 79.7%; Pred. No. 1.5e-66; Matches 141; Conservative 19; Mismatches 17; Indels
                                                      82.0%; Score 796; DB 13; Length 419; 80.6%; Pred. No. 1.4e-67; 1ive 19; Mismatches 16; Indels
PS00805; CALRETICULIN_REPEAT; 3.
PS00014; ER_TARGET; UNKNOWN_1.
419 AA; 48658 MW; 2C857036769673BF CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000C5B4004699B6 CRC64;
                                                                                                                                                                                                                                                                                            01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pfam; PF00262; Calreticuln; 1.
PRINTS; PR00626; Calreticuln; 1.
PROSITE; PS00803; Calreticuln; 1.
PROSITE; PS00804; CALRETICULIN. 1; 1.
PROSITE; PS00805; CALRETICULIN. 2; 1.
PROSITE; PS00805; CALRETICULIN. EREAT.
SEQUENCE 417 AA; 48723 MW; 2000C5B400469
                                                                                                                                                                                                                                                                           417 AA
                                                                                                                                                                                                                                                                          PRT;
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InterPro; IPR000886; ER_target.
InterPro; IPR001580; Calreticulin.
                                                      Query Match
Best Local Similarity 80.6'
Matches 145; Conservative
                                                                                                                                                                                                                                                                          PRELIMINARY;
PROSITE; 1
PROSITE; 1
SEQUENCE
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RESULT Q16893

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"A secreted calreticulin protein in Ixodid tick (Amblyomma americanum)
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Eukaryota, Metazoa; Echinodermata; Eleutherozoa; Echinozoa;
Echinoidea; Euechinoidea; Echinoida; Strongylocentrotidae;
Strongylocentrotus.
NCBI_TaxID=7668;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SASFEPFSNKGOTLVVQFTVKHEONIDCGGGYVKLFPNSLDOTDMHGDSEYNIMFGPDIC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Jaworski D.C., Simmen F.A., Lamoreaux W.J., Coons L.B., Muller M.T., Needham G.R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .;
0
                                                                                                                                         Eukaryota; Metazoa; Arthropoda; Chelicerata; Arachnida; Acari;
Parasitiformes; Ixodida; Ixodidae; Amblyomma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            78.2%; Score 759; DB 5; Length 410; 76.7%; Pred. No. 4.4e-64; Live 15; Mismatches 27; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
TISSUE-SALLYARY GLANDS;
Fain-Thornton J.M., Jaworski D.C., Needham G.R.;
Submitted (NOV-1998) to the EMBL/GenBank/DDBJ databases.
EMBL, U07708; AGC79094.1; -
InterPro; IPR000886; ER_target.
InterPro; IPR001580; Calrettculin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Submitted (MAR-1994) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PFAM: PF00262; calreticulin; 1.
PRINTS; PR00626; CALRETICULIN; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00805; CALRETICULIN_1; 1.
PROSITE; PS00014; ER_TARGETICULIN_NM, 1.
SEQUENCE 410 AA; 47485 MW; 32CC88750A17DC54 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-UN-2001 (TrEMBLrel. 17, Last annotation update)
CALRETICULIN PRECURSOR.
                        Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AA
    Created)
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                                                                                                                                                                                                                    [1]
SEQUENCE OF 49-410 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 76.78
Matches 138; Conservative
                        (TrEMBLrel. (TrEMBLrel.
(TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
TISSUE-SALIVARY GLANDS;
                                                                                                                                                                                                                                                                TISSUE-SALIVARY GLANDS
                                                                                                                     Amblyomma americanum.
                                                                                                                                                                                        NCBI_TaxID=6943;
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Gaps

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Indels

30;

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F-EPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICGP 122
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                                                                                                   18 VYFKEEFLD-DSWKERWVQSKHKSDYGEFVLSAGKYFGDATRDQGMKTSQDAKFYSRAAK 76
                                                                4 VYFKEQFLDGDGWTSRWIESKHK-SDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYALSA 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4 VYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYALSAS 63
                                                                                                                                                                                                                                                                                          123 GTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Strongylida; Ancylostomatoidea; Ancylostomatidae; Bunostominae; Necator.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A PETCHARD D.I., Brown A., McElroy P., Loukas A., Girdwood K., A Berry C., Fullkrug R., Beck E.;

"Calreticulin is a hookworm allergen.";

"Calreticulin is a hookworm allergen.";

"Labmitted (JUN-1998) to the EMBL/GenBank/DDBJ databases.

"R IMEL, AJ006799. CAA07264.1;

"InterPro; IPR001580; Calreticulin.

"R PROMOSE; Calreticulin.

"R PROMOSE; Calreticulin.

"R PROMOSE; PROMOSE; Calreticulin.

"R PROMOSE; PROMOSE; Calreticulin.

"R PROMOSE; PROMOSE; Calreticulin.

"R PROSTIE; PS00804; CALRETICULIN. 2; 1.

"R PROSTIE; PS00804; CALRETICULIN_REPEAT; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21F38B0515487B6F CRC64;
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10, Last sequence update)
17, Last annotation update)
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Last annotation update)
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23;
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Pred. No. 9.8e-57;
30; Mismatches 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  403 AA
              14; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            387 AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
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46833 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-NOV-1998 (TrEMBLrel. 08, 01-NOV-1998 (TrEMBLrel. 08, 01-JUN-2001 (TrEMBLrel. 17,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 70.2%;
Best Local Similarity 68.5%;
Matches 122; Conservative 3
              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (TrEMBLrel. 1 (TrEMBLrel. 1 (TrEMBLrel. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CALRETICULIN PRECURSOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Necator americanus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           403 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=51031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Signal; Allergen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 097372;
01-MAY-1999
01-MAY-1999
01-JUN-2001
           Matches 132;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
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Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroidea; Drosophilidee; Drosophila.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  63 SPEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICGP 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     79 KFTDFSNEGKDLVIQFTVKHEQKIDCGGCYAKIFPADLDQEDMHGDSPYNIMFGPDICGP 138
                          Susan J.M., Just M.L., Lennarz W.J.;
"Cloning and Characterization of AlphaP Integrin and Calreticulin in Embryos of the See Urchin.";
Submitted (AUG-1999) to the EMBL/GenBank/DDBJ databases.
EMBL; AF177915; AAD55725.1;
InterPro: IPR000886; ER_target.
InterPro: IPR001886; ER_target.
Prolom: PR001866; Calreticulin.
Prolom: PR001866; Calreticulin.
Prolom: PR001866; Calreticulin.
PRONON: PR001866; Calreticulin.
PROSTE: PS008045; CALRETICULIN.
PROSTE: PS008045; CALRETICULIN.
PROSITE; PS008045; CALRETICULIN.REPEAT; 3.
PROSITE; PS008045; CALRETICULIN.REPEAT; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20 VYFEDQFADA-SWESRWVESVHKGSDAGKFKWSAGKFYGDAEQDKGIQTSQDAKFYGLSA 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 123 GTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4 VYFKEQFLDGDGWTSRWIESKHK-SDFGKFYLSSGKFYGDEEKDKGLQTSQDARFYALSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ;
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R Flybaso; F880000558; Crc.

R InterPro; IPR001580; Calreticulin.

R InterPro; IPR001580; Calreticulin.

R PRINTS; PR00525; Calreticulin; 1.

R PRINTS; PR00526; Calreticulin; 1.

R PRINTS; PR00626; Calreticulin; 1.

R PROSITE; PS00803; CALRETICULIN; 1.

R PROSITE; PS00804; CALRETICULIN; 1.

R PROSITE; PS00804; CALRETICULIN, 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 421;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 406;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 75.3%; Score 731; DB 5; Length 42
Best Local Similarity 74.7%; Pred. No. 2.1e-61;
Matches 133; Conservative 19; Mismatches 24; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                      421 CALRETICULIN,
48822 MW; 172C664F59F41F93 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   68BA49A6BB1CC427 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Dodo K., Sakoyama Y., Gamo S.; "Drosophila melanogaster calreticulin for mRNA.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 699; DB 5;
Pred. No. 2.2e-58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ¥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    406
                                                                                                                                                                                                                                                                                                                                                                                                                                    POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Drosophila melanogaster (Fruit fly).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                46809 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   72.08;
74.28;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      421 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A. STRAIN-OREGON-R;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   406 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CRC OR CG9429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CALRETICULIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROSITE; SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                       Signal.
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RESULT Q9U916

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Length 403; Indels

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RA Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
RA Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,
RA Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,
RA Alzawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
RA Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,
RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casvant T.,
RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
RA Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
RA Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
RA Brownstein M.J., Hull D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
RA Oustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
RA Nordone P., Ring B., Riinqwald M., Rodriquez I., Sakamoto N.,
RA Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
RA Winshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
RA Warshiyaki Y.
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                                                                                                                         64 FEP-FSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICGP 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4 VYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYALSAS 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                        4 VYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYALSAS 63
                                                               19 VYFKEEFLD-DEWENRWIKSKHKDDFGKWEISHGKFYGDAVKDKGLKTTQDAKFYSIGAK 77
                                                                                                                                                                                                               123 GTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'Functional annotation of a full-length mouse cDNA collection.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ;
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28; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B13BC4ADB11B0442 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                              Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     66.0%; Score 641; DB 11;
65.0%; Pred. No. 6.4e-53;
live 30; Mismatches 32;
  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                          Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRAIN=C57BL/6J; TISSUE=TESTIS;
MEDLINE=21085660; PubMed=11217851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro; IPR001580; Calreticulin.
Pfam; PF00262; calreticulin; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRINTS: PR00626; CALRETICULIN.
PRODOM: PD001866; Calreticulin; 1.
PROSITE; PS00803; CALRETICULIN_1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MGD; MGI:1920566; 1700031L01Rik
26;
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EMBL; AK006582; BAB24660.1;
                                                                                                                                                                                                                                                                                                                                                                                                                            01-JUN-2001 (TrEMBLrel. 17, 01-JUN-2001 (TrEMBLrel. 17,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 66.0%
Best Local Similarity 65.0%
Matches 115; Conservative
Conservative
                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1700031L01RIK PROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   380 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=10090;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1700031L01RIK.
                                                                                                                                                                                                                                                                                                                                                                                                        01-JUN-2001
Matches 122;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE
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Q9D9Q6
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4 VYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYALSAS 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         19 IYFKEEPSD-DDWEKRWIKSKHKDDFGKWEISHGKFYGDAVKDKGLKTTQDAKFYSIGAK 77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         123 GTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Nematoda; Chromadorea; Spirurida; Filarioidea;
Onchocercidae; Dirofilaria.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Nematoda; Chromadorea; Spirurida; Filarioidea;
                                                                                                                                                                  Tsuji N., Morales T.H., Ozols V.V., Carmody A.B., Chandrashekar R. "Molecular characterization of a calcium-binding protein from the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MacLennan K., Hoffman W.H., Taylor D.W.;
MacLennan K., Hoffman W.H., Taylor D.W.;
Submitted (SEP-1997) to the EMBL/GenBank/DDBJ databases.
EMBL; AJ001621; CAA04877.1; -.
R interPro; IPR001580; Calreticulin.
Pfam: PF00262; calreticulin; 1.
R ProDom; PD001866; CALRETICULIN.
R PROSITE; PS00804; CALRETICULIN.; 1.
R PROSITE; PS00804; CALRETICULIN_2; 1.
R PROSITE; PS00805; CALRETICULIN_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 387;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 375;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             70.0%; Score 680; DB 5; Length 38 68.5%; Pred. No. 1.3e-56; Live 27; Mismatches 27; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           E7741BF6AAFA5885 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     43842 MW; 03F7642FBFF7A5B8 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-JAN-1998 (TrEMBLrel. 05, Created)
01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 673; DB 5;
Pred. No. 5.8e-56;
                                                                                                                                                                                                                            MOI. Blochem. Parasitol. 97:69-79(1998).
EMBL. AF052978, AAD03405.1;
Interpro: IPR001580; Calreticulin.
Prim; PR00262; Calreticulin; PR00505; Calreticulin; PR00505; Calreticulin; PR05050; CALRETICULIN.
PROSITE; PS00803; CALRETICULIN.1; PROSITE; PS00804; CALRETICULIN.2; 1.
PROSITE; PS00805; CALRETICULIN.2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              375 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                POTENTIAL.
CALRETICULIN.
                                                                                                                                                                                                               filarial parasite Dirofilaria immitis.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
                                                                                                                                              MEDLINE-99094497; PubMed-9879888;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              44941 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    69.3%;
68.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Onchocercidae; Litomosoides NCBI_TaxID=42156;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 68.5%
Matches 122; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RAL-1 PROTEIN (FRAGMENT).
Litomosoides sigmodontis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
CALRETICULIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   18
387
                      irofilaria immitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     375 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           387 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                       SEQUENCE FROM N.A.
                                                                            NCBI_TaxID=6287;
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RESULT 018478

SEQUENCE

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01-NOV-1996 (TrEMBLrel.
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                  Triticeae; Horde
NCBI_TaxID-4513;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Calcium-binding
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NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
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Q43712
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20 VFFQERF--EDGWESRWVKSEWKKDENMAGEWNHTSGKWHGDAE-DKGIQTSEDYRFYAI 76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121 GPGTKKVHVIPNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSL 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryotu; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnollophyta; Lillopsida; Poales; Poaceae; Pooldeae;
Triticeae; Hordeum,
                                                                                                                                                                                                                                                                                                                                                                                                                     SECUENCE FROM N.A.
STRAIN-MOREX: TISSUE-OVARY;
HEDLINE-94339696; PubMed-7914763;
Chen F., Hayes P.M., Mulroony D., Pan A.;
Identification and characterization of cDNA clones encoding plant culreticulin in barley.";
Plant Cell 6:835-843(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CRNJ.
Hordeum vulgare (Barley).
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
              124 TKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                     141 IKKVHVILYFKNQYHENKKPIRCKVDGFTHLYTLILRPDLSYEVKVDGQSIESGSIE 197
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      47037 MW; 37F6C95D6AA78AB0 CRC64;
                                                                                                                                                                                                                        Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Lust sequence update)
Last annotation update)
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Best Local Similarity 56.4%; Pred. No. 3.4e-43;
Matches 101; Conservative 31; Mismatches 41;
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PRINTS; PR00626; CALRETICULIN.
PROSITE; PS00804; CALRETICULIN.; 1.
PROSITE; PS00804; CALRETICULIN.; 1.
PROSITE; PS00805; CALRETICULIN.; 2; 1.
PROSITE; PS00805; CALRETICULIN. 2; 1.
PROSITE; PS00805; CALRETICULIN. REPEAT; 2.
                                                                                                                                                           412
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                                                                                                                                                                                                   Created)
                                                                                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; 127348; AAA32948.1; -. Mendal; 8846; Horvu;1166;8546. Interpro; IPR000886; ER_target. Interpro; IPR001580; Calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                              01-NOV-1996 (TrEMBLrel. 01, 01-NOV-1996 (TrEMBLrel. 01, 01-JUN-2001 (TrEMBLrel. 17, CALRETICULIN (FRAGMENT).
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01-NOV-1996 (TrEMBLrel. 01,
01-NOV-1996 (TrEMBLrel. 01,
01-JUN-2001 (TrEMBLrel. 17,
CALRETICULIN (FRAGMENT).
                                                                                                                                                                                                                                                                                                     Hordeum vulgare (Barley).
                                                                                                                                                           PRELIMINARY;
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61 SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4 VYFKEQFLDGDGWTSRWIESKHKSD---FGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooideae;
Triticeae; Hordeum.
                                                                                                                                                                                                   Chen F., Hayes P.M., Mulroony D., Pan A.;
Identification and characterization of cDNA clones encoding plant
"altericulin in barley";
Plant Cell 6:835-843(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Zea mays (Maize).
Skarytora, Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACC cl
Panicoideae; Andropognoae; Zea.
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SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
Dresselhaus T., Hagel C., Loerz H., Kranz E.;
"Isolation of a full-length CDNA encoding calreticulin from a PCR library of in vitro zygotes of maize.";
Plant Mol. Biol. 31:23-34(1996).
EMBL; 246772; CAA86728.1; -.
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Napler R.M., Trueman S., Henderson J., Boyce J.M., Hawes C.R.,
Fricker M.D., Venis M.A.;
J. Exp. Bot. 46:1603-1613(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 415;
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01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
CALCIUM-BINDING PROFEIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     55.5%; Score 539; DB 10; 56.4%; Pred. No. 3.4e-43; iive 31; Mismatches 41;
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                                                                                                                                                                                                                                                                                                                                                                                                                                  pfam; PF00262; calreticulin; 1.
PROMINS; PRO0626; CALRETICULIN.
PRODOM; PD001866; Calreticulin; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 2.
PROSITE; PS000014; ER_TARGET; UNNOWN.1.
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Mendel: 847; Horvu,1166;8547.
InterPro; IPR000886; ER_target.
InterPro; IPR001580; Calreticulin.
                                                                                                         SEQUENCE FROM N.A.
STRAIN-MOREX; TISSUE-OVARY;
MEDLINE-94339696; PubMed-7914763;
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415
47359 MW; 2
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Matches 101; Conservative
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3;
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                                                                                                                                                                                                                                                                                                                                              .
9
                                                                                                                                                                                                                                                               Query Match 55.2%; Score 536; DB 10; Length 421; Best Local Similarity 56.4%; Pred. No. 6.7e-43; Matches 101; Conservative 31; Mismatches 41; Indels
                                                                                                                                                                                     SIĞNAL 1 25 POTENTIAL.
CHAIN 26 421 CALRETICULIN.
SEQUENCE 421 AA; 48012 MW; 5AAE02B77ED3126D CRC64;
EMBL; X89813; CAA61939.1; -. Mendel; 11228; Zeama;1166;11228.
InterPro; IPR000886; ER_target.
InterPro; IPR001580; Calreticulin.
Pfam; PF00262; Calreticulin. 1.
PRINTS; PR00626; CALRETICULIN. 1.
PROSITE; PS00803; CALRETICULIN. 1.
PROSITE; PS00804; CALRETICULIN. 1; I.
PROSITE; PS00804; CALRETICULIN. 1; I.
PROSITE; PS00804; CALRETICULIN. 1; I.
PROSITE; PS00805; CALRETICULIN. REPRAT. 2.
PROSITE; PS00805; CALRETICULIN. REPRAT. 2.
SIGNAL Calcium-binding. 1.
25 POTENTIAL.
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Search completed: January 9, 2002, 15:03:27 Job time: 269 sec

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GenCore version 4.5
Copyright (c) 1993 - 2000 Compugen Ltd.
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- protein search, using sw model OM protein 9, 2002, 15:02:02; Search time 43.73 Seconds January Run on:

(without alignments)
106.258 Million cell updates/sec

US-09-828-000-4 Perfect score: Title:

61

340 1 TDMHGDSEYNIMFGPDICGP.....IRCKDDEFTHLYTLIVRPDN Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

219241 segs, 76174552 residues Searched: 219241 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

pirl:* pir2:* pir3:* PIR_68:* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

		đ			SUMMARIES	
Result No.	Score	Query Match	Query Match Length	DB	ID	Description
	340	100.0	417	-	A37047	calreticulin precu
7	335	98.5	400	7	543376	٠,
m	335		416	П	S06763	
4	335	98.5	416	~	JH0819	calreticulin precu
S	335		418	Н	A34154	calreticulin precu
9	335		421	N	836799	calreticulin precu
7	305		405	7	JH0795	calreticulin precu
80	296	87.1	384	~	S29130	calreticulin (clon
თ	293	86.2	406	~	A56637	calreticulin homol
10	288	84.7	411	ć	S29129	calreticulin precu
11	287	84.4	419	7	S71343	calreticulin precu
12	261	76.8	336	7	A32507	41K larval antigen
13	242	71.2	393	П	A48573	calreticulin autoa
14	233.5	68.7	395	7	S25851	calreticulin precu
15	207	6.09	416	7	T14554	calreticulin - bee
16	205	60.3	421	7	S58170	calreticulin precu
17	202	59.4	415	~	T10172	calreticulin - cas
18	200		412	7	T05703	calreticulin - bar
19	200		415	~	T05705	
20	199	58.5	425	7	C96605	calreticulin (Crt1
21	195	57.4	422	7	T07841	probable calreticu
22	194		444	7	H86224	hypothetical prote
23	191		416	7	T16968	
24	190		389	7	T03691	calreticulin - com
25	123.5		265	7	153260	calnexin - human
26	122.5	36.0		7	T06415	calnexin - soybean
27	121.5	35.7		~	A46673	calnexin precursor
28	120.5	35.4		~	B54354	
29	120.5	35.4	591	7	C54354	calnexin precursor

calnexin precursor	calnexin-like prot	probable calnexin	calnexin homolog S	hypothetical prote	calnexin precursor	calnexin - maize (calmegin precursor	calnexin-t - mouse	calnexin homolog -	calcium-binding pr	calnexin homolog C	site-specific DNA-	hypothetical prote		hypothetical prote
A37273	JN0597	T10892	A46637	S40938	S71342	T03251	A53418	A54086	T49873	S56142	S70552	JU0470	H85013	T01733	S50439
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593	530	540	582	619	622	428	611	611	532	260	297	540	457	896	260
35.4	34.0	34.0	34.0	34.0	34.0	31.9	31.9	31.9	30.4	30.3	26.6	22.8	19.9	19.9	19.4
120.5	115.5	115.5	115.5	115.5	115.5	108.5	108.5	108.5	103.5	103	90.5	77.5	67.5	67.5	99
30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45

ALIGNMENTS

RESULT

1
43 / 04 /
salreticulin precursor - human
W; Alternate names: 52K ribonucleoprotein autoantigen Ro/SS-A; 60K integrin-binding pr
Species: Homo sapiens (man)
:;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 18-Feb-2000
; Accession: A42330; A37047; A46452; A28812; PH1525; A40346; S11475; T45075
A; McCauliffe, D.P.; Yang, Y.S.; Wilson, J.; Sontheimer, R.D.; Capra, J.D.
J. Biol. Chem. 267, 2557-2562, 1992
A; Title: The 5'-flanking region of the human calreticulin gene shares homology with t
A;Reference number: A42330; MUID:92129342
A; Accession: A42330

A;Residues: 1-17 <MC2>
A;Note: sequence extracted from NCBI backbone (NCBIN:78537, NCBIP:78536)
B;Note: sequence extracted from NCBI backbone (NCBIN:78537, NCBIP:78536)
B;Note: sequence extracted from NCBI backbone (NCBIN:78537, NCBIP:78536)
B;Note: Sequence extracted from NCBI backbone (NCBIN:78536)
A;Title: Molecular cloning, expression, and chromosome 19 localization of a human RO/A;Reference number: A37047; MUID:90237213

A; Molecule type: mRNA
A; Residues: 1-417 < MCC>
A; Cross-references: GB:M32294; NID:g337486; PIDN:AAA36582.1; PID:g337487
A; Note: the authors translated the codon GTA for residue 349 as Tyr
B; Rokeach, L.A.; Haselby, J.A.; Meilof, J.F.; Smeenk, R.J.; Unnasch, T.R.; Greene, B. J. Immunol. 147, 3031-3039, 1991
A; Title: Characterization of the autoantigen calreticulin.
A; Reference number: A46452; MUID:92013129
A; Accession: A46452

A; Recule type: mRNA
A; Residues: 1-417 <ROK>
A; Molecule type: mRNA
A; Residues: 1-417 <ROK>
A; Cross-references: GB:M84739; NID:g179881; PIDN:AAA51916.1; PID:g179882
A; Cross-references: GB:M84739; NID:g179881; PIDN:AAA51916.1; PID:g179882
A; Note: sequence extracted from NCBI backbone (NCBIN:60749, NCBIP:60750)
R; Lieu, T.S.; Newkirk, M.M.; Capra, J.D.; Sontheimer, R.D.
J; Clin. Invest. 82, 96-101, 1988
A; Title: Nolecular characterization of human Ro/SS-A antigen. Amino terminal sequence
A; Reference number: A28812; MUID:88273610
A; Rocession: A28812
A; Molecule type: protein
A; Residues: 18-41 <LIE>
A; Note: 18-A1a was also found
R; Dupuis, M.; Schaerer, E.; Krause, K.H.; Tschopp, J.
J; Exp. Med. 177, 1-7, 1993
A; Title: The calcium-binding protein calreticulin is a major constituent of lytic gra
A; Reference number: PHIS25; MUID:93115648
A; Accession: PHIS25

A; Molecule type: protein
A; Residues: 18-27 < DUP>
A; Residues: 18-27 < DUP>
A; Experimental source: LAK cell
R; Rojiani, M.V.; Finlay, B.B.; Gray, V.; Dedhar, S.
Biochemistry 30, 9859-9866, 1991
A; Title: In vitro interaction of a polypeptide homologous to human Ro/SS-A antigen (c

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us-09-828-000-4.rpr

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F;397-400/Region: endoplasmic reticulum retention signal F;120-146/Disulfide bonds: *status experimental F;162/Binding site: carbohydrate (Asn) (covalent) *status experimental
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N;Alternate names: calcium-binding protein 3
C;Species: Rattus norvegicus (Norway rat)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Molecule type: protein
A; Residues: 74-80; 142-151; 186-193 <WHI>
                                                                                                                                                           ch 98.5%;
1 Similarity 98.4%;
60; Conservative
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Best Local Similarity
Matches 60; Conserv
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A; Reference number: A40346; MUID:92002034
A; Accession: A40346
A; Mcolecule type: protein
A; Acsaduces: 18-34, 'R' <ROJ>
A; Mcolecule type: protein
A; Residuces: 18-34, 'R' <ROJ>
B; Krauusu, K. H.; Simmerman, H.K.B.; Jones, L.R.; Campbell, K.P.
B; Krauusu, K. H.; Simmerman, H.K.B.; Jones, L.R.; Campbell, K.P.
B; Krauusu, K. H.; Simmerman, H.K.B.; Jones, L.R.; Campbell, K.P.
B; Krauusu, K. H.; Simmerman, H.K.B.; Jones, L.R.; Campbell, K.P.
B; Krauusu, K. H.; Simmerman, H.K.B.; MuiD:90380058
A; Reference number: S11475; MuiD:90380058
A; Recension: S11475; MuiD:90380058
A; Recension: S13 <RRA>
A; Residuces: 18-32 <RRA>
A; Residuces: 18-32 <RRA>
A; Residuces: Cappoint Data Library, November 1996
A; Recension: Characterization by genomic sequence analysis of a gene-rich 111 kb regic
A; Residuces: Tailons Cappoint C
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A.Coss-references: GDB:125179; OMIN:109091
A.Map position: 19p13.19p13.2
A.Introns: 31/1; 65/1; 133/1; 164/3; 234/3; 272/3; 320/3; 351/3
A.Note: CRTC
G.Superfamily: calreticulin
G.Superfamily: calcium binding
F.i-17/Domain: signal sequence #status predicted <SIG>F:18-17/Product: calreticulin #status predicted <MAT>F:18-417/Region: endoplasmic reticulum retention signal
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100.0%; Score 340; DB 1;
Best Local Similarity 100.0%; Pred. No. 4.5e-33;
Matches 61; Conservative 0; Mismatches 0;
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Calreticulin precursor - mouse
N;Alternate names: 55K calcium-binding reticuloplasmin; calregulin
C;Species: Mus musculus (house mouse)
C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999
C;Accession: S06763; JC1444; PC1233; A57498
R;Smith, M.J.; Koch, G.L.E.
R;Smith, M.J.; Koch, G.L.E.
A;Title: Multiple zones in the sequence of calreticulin (CRP55, calregulin, HACBP), a A;Reference number: S06763; MulD:90059955
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Wolecule type: DNA
A; Readdues: 1-416 <SMD.
A; Cross-references: EMBL: X14926; NID:950567; PIDN:CAA33053.1; PID:950568
A; Cross-references: EMBL: X14926; NID:950567; PIDN:CAA33053.1; PID:950568
R; Mazzarella, R.A.; Gold, P.; Cunningham, M.; Green, M.
Gene 120, 217-225; 1992
A; Title: Determination of the sequence of an expressible cDNA clone encoding ERp60/ca
A; Reference number: JC1444; MUID:93013037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Molecule type: protein
A;Residues: 18-41 <MA.2
A;Residues: 18-41 <MA.2
J. Biol. Chem. 270, 15926-15929, 1995
A;Title: Cell surface calreticulin is a putative mannoside lectin which triggers mous
A;Reference number: A57498; MUID:95332280
                                                                                                                                                                                   103 TDMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPN 162
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                                                                                                                                              1 TDMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPD 60
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Cross-references: GB:M92988; NID:g193084; PIDN:AAA37569.1; PID:g193085
A;Accession: PC1233
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   Length 400;
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C; Keywords: calcium binding
E;1-17, Domain: signal sequence #status predicted <SIG>E;1-17, Domain: signal sequence #status experimental <kMar>E;413-416/Region: endoplasmic reticulum retention signal
Score 335; DB 2;
Pred. No. 1.7e-32;
1; Mismatches 0
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A) Experimental source: brain, clone 9.4
A) Accession: S36800
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A; Residues: 1-418 <FLI>
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Best Local Similarity
Matches 60; Conserv
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Best Local Similarity
Matches 60; Conserv
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A; Residues: 1-421 <LIU>
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C. Date: 30-Sep-1993 isequence_revision 20-Aug-1994 itext_change 20-Jun-2000
C. Accession: JM0191-A4416_Sil205_per1009_Silvate.
E. Accession: JM0191-A4416_Silvate.
E. Accession: JM0191-A4416_Silvate.
Accession: JM0191-A4416_S
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A; Residues: 18-36 < VAN>
R; Residues: 18-36 < VAN>
R; Treves, S.; de Mattei, M.; Lanfredi, M.; Villa, A.; Green, N.M.; MacLennan, D.H.; Meld
Biochem. J. 271, 473-480, 1990
A; Title: Calreticulin is a candidate for a calsequestrin-like function in Ca(2+)-storage
A; Reference number: S13045; MUID:91054414
A; Molecule type: protein
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A; Residues: 18-23, 'x' 25-32 < YOK>
R; Van, P.N.; Peter, F; Soeling, H.D.
B.O.l. Chem. 264, 17494-17501, 1989
A; Title: Four intracisternal calcium-binding
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A; Status: preliminary
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R;Fliegel, L.; Burns, K.; MacLennan, D.H.; Reithmeier, R.A.F.; Michalak, M.
J. Biol. Chem. 264, 21522-21589, 1989
A;Title: Molecular cloning of the high affinity calclum-binding protein (calreticulin
A;Reference number: A34154; MUID:90094320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Cross-references: GB:J05138; NID:g164858; PIDN:AAA31188.1; PID:g164859
R; Treves, S.; de Mattei, M.; Lanfredi, M.; Villa, A.; Green, N.M.; MacLennan, D.H.; M Biochem. J. 271, 473-480, 1990
A; Title: Calreticulin is a candidate for a calsequestrin-like function in Ca(2+)-stor A; Reference number: S13045; MUID:91054414
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C:Species: Oryctolagus cuniculus (domestic rabbit)
C:Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999
C:Accession: A34154; S13047
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C; Superfamily: calreticulin
C; Keywords: calcium binding; glycoprotein
F;1-17/Domain: signal sequence #status predicted <SIG>
F;18-416/Product: calreticulin #status experimental <MAT>
F;204-212/Region: nuclear location signal
F;413-416/Region: endoplasmic reticulum retention signal
F;344/Binding site: carbohydrate (Asn) (covalent) #status predicted
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                                                                                                                                                                                                                                                                                                                      Length 416;
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F;1-17/Domain: signal sequence #status predicted <SIG>
F;415-418/Region: endoplasmic reticulum retention signal
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                                                                                                                                                                                                                                                                                                                                                       Pred. No. 1.8e-32;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                         Score 335; DB 2;
                                                                                                                                                                                                                                                                                    98.5%; Scot.
100.0%; Pred. No. 1...
0; Mismatches
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N;Alternate names: Ro/Ss-A autoantigen/caireticuiin homolog
C;Species: Drosophila melanogaster
C;Dete: 11-Aug-1995 #sequence_revision 11-Aug-1995 #text_change 13-Aug-1999
C;Accession: A56637; A37158
R;Smith, M.J.
DNA Seg. 3, 247-250, 1992
A;Title: Nucleotide sequence of a Drosophila melanogaster gene encoding a calreticuli
A;Reference number: A56637; MUID:93208374
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A; Cross-references: GB:X64461; NID:97685; PIDN:CAA45791.1; PID:97686
A; Cross-references: GB:X64461; NID:97685; PIDN:CAA45791.1; PID:97686
A; Note: sequence extracted from NCBI backbone (NCBIN:128274, NCBIP:128275)
B; McCauliffe, D.P.; Zappi, E.; Lieu, T.S.; Michalak, M.; Sontheimer, R.D.; Capra, J.Clin. Invest. 86, 332-335, 1990
A; Title: A human Ro/SS-A autoantigen is the homologue of calreticulin and is highly A; Reference number: A37158; MUID:90307981
                                                                                                           C.Species: Xenopus lacvis (African clawed frog)
C.Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 13-Aug-1999
C.Accession: S29130; T01068
Biochem. J. 287, 579-581, 1992
A/Title: Identification of calreticulin isoforms in the central nervous syst A;Reference number: S29139; MUID:93074997
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A.Molecule type: mRNA
A.Residues: 1-339, 'XTGR' <TRW>
A.Residues: 1-339, 'XTGR' <TRW>
A.Cross references: EMBL:X67598; NID:g64610; PIDN:CAA47867.1; PID:g64611
A.Experimental source: CNS
C.Superfamily: calreticulin
C.Keywords: glycoprotein
F:381-384/Region: endoplasmic reticulum retention signal
F;316/Binding site: carbohydrate (Asn) (covalent) #status predicted
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
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C; Superfamily: calreticulin
C; Keywords: calcium binding; endoplasmic reticulum
F;1-17/Domain: signal sequence #status predicted <SIG>
F;403-406/Region: endoplasmic reticulum retention signal
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Pred. No. 7.7e-28;
3; Mismatches 5,
                                                                                      calreticulin (clone 8) - African clawed frog
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86.9%;
                                                                                                                                                                                                                                                                                                                                                                                             A; Molecule type: mRNA
A; Residues: 1-384 <TRE>
A; Cross-references: EMBL: X67598
A; Accession: T01068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
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Best Local Similarity
Matches 53; Conserv
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A, Status: preliminary
A, Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N 152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 N 61
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A; Recension: JH0795; MUID:9308937
A; Molecule type: mRNA
A; Recension: JH0795
A; Molecule type: mRNA
A; Redidues: 1-405 < KENS
A; Reperimental source: abdominal ganglion and antral nervous system
A; Reperimental source: abdominal ganglion and antral nervous system
A; Redidues: C. Gawlinowicz, M.A.; Barzilai, A.; Randel, E.R.; Sweatt, J.D.
Proc. Natl. Acad. Sci. U.S.A. 85, 7008-7012, 1988
A; Tille: Sequencing of proteins from two-dimensional gels by using in situ digestion and tion in Aphysla.
A; Reference number: A94207; MUID:88320566
A; Accession: B31409
A; Molecule type: protein
A; Residues: 'X, 17-28, 'X, 30-31 < KE2>
B; Sweatt, J.D.; Rennedy, T.E.; Wager-Smith, K.; Gawlnowicz, M.A.; Barzilai, A.; Karl, K.
B; Sweatt, J.D.; Rennedy, T.E.; Wager-Smith, K.; Gawlnowicz, M.A.; Barzilai, A.; Karl, K.
B; Sweatt, J.D.; Rennedy, T.E.; Wager-Smith, R.; Gawlnowicz, Corporesis identified and in A; Residues: 'X, 17-28, 'X, 30-31 < SWE>
B; Residues: calcium binding; endoplasmic reticulum
C; Reywords: culcium binding; endoplasmic reticulantal < Mary
B; 1-15/Domain: signal sequence #status predicted < SIO>
B; Molecule: calreticulin #status predicted < SIO>
B; Molecule: calreticulin #status predicted < SIO>
B; Molecule: calreticulin #status experimental < Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Calrettculin precursor - California sea hare

W;Alternate names: protein 407

C;Species: Aplysia californica (California sea hare)

C;Species: Aplysia californica (California sea hare)

C;Dute: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999

C;Acression: JH0795; B31409; F60977

C;Acression: JH0795; B31409; F60977

Wenron 9, 1013-1024, 1992

A;Title: Long-term sensitization training in aplysia leads to an increase in calreticuli

A;Reference number: JH0795; MUID:93098937
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                                                                                                                   predicted <MAT>
C;Superfamily: calreticulin
C;Keywords: calcium binding; glycoprotein
F;1-34/Domain: signal sequence #status predicted <SIG>
F;3-421/Product: calreticulin, brain isoform 2 #status predicted <W
F;38-421/Region: endoplasmic reticulum retention signal
F;418-421/Region: endoplasmic reticulum retention signal
F;181-167/Disulfide bonds: #status predicted
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                                                                                                                                                                                                                                                                                                                 98.5%; Score 335; DB 2; Lv 98.4%; Pred. No. 1.8e-32; Live 1; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              89.7%; Score 305; DB 1; I
lurity 86.9%; Pred. No. 6.8e-29;
Conservative 5; Mismatches 3;
                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 60; Conserv
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Best Local Similarity
Matches 53; Conserv
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Query Match Best Local S: Matches 52

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C; Species: Schistosoma mansoni
C; Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999
C; Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999
C; Accession: A48573
R; Khalife, J; Trottein, F.; Schacht, A.M.; Godin, C.; Pierce, R.J.; Capron, A.
Mol. Biochem. Parasitol, 57, 199-202, 1993
A; Title: Cloning of the gene encoding a Schistosoma mansoni antigen homologous to hum A; Reference number: A48573; MUID: 93165070
                                                                                                                                                                                                                                                                                                                                                                                                                  expression cDNA clones encoding antigens
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                                                                                                                                                                                                                                                                                                         C;Species: Onchocerca volvulus
C;Date: 21-May-1990 #sequence_revision 21-May-1990 #text_change 12-Apr-1995
C;Date: 21-May-1990 #sequence_revision 21-May-1990 #text_change 12-Apr-1995
C;Accession: A32501 # A 2813
B; Unnasch, T.R.; Gallin, M.Y.; Soboslay, P.T.; Erttmann, K.D.; Greene, B.M.
J. Clin. Invest. 82, 262-269, 1988
A;Title: Isolation and characterization of expression cDNA clones encoding # A;Reference number: A92769; MUID:88273584
A;Reference number: A32507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S25851
calreticulin precursor - Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Date: 06-Jan-1994 #sequence_revision 10-Nov-1995 #text_change 05-Nov-1999
                                                                                   sequence inconsistent with the nucleotide translation sequence extracted from NCBI backbone (NCBIN:125085, NCBIP:125086)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                           TDMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPD 60
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           calreticulin autoantigen homolog precursor - fluke (Schistosoma mansoni)
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Pred. No. 1e-23;
Mismatches 8; Indels
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                                                                                                                                                                                                                                                                                        41K larval antigen - nematode (Onchocerca volvulus) (fragment)
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                     Indels
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Pred. No. 2.3e-21;
3; Mismatches 10;
  Pred. No. 1e-26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Residues: 1-393 <KHA>
A;Cross-references: GB:M93097; NID:9160928
A;Note: sequence inconsistent with the nucleotide
                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 76.8%;
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71.2%;
Best Local Similarity 77.6%;
Matches 45; Conservative
85.2%;
Best Local Similarity 85.2
Matches 52; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Superfamily: calreticulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Molecule type: mRNA
A; Residues: 1-336 <UNN>
C; Superfamily: calreticu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity
Matches 46; Conserv
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                                                                                                                                           61 N 61
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Sy1343
calreticulin precursor - Korean frog)
C;Species: Rana rugosa (Korean frog)
C;Accession: S1343
R;Yamamoto, S.; Nakamura, M.
FEBS Lett. 387, 27-32, 1996
A;Ftle: Calnexin: its molecular cloning and expression in the liver of the frog, Rana r
A;Recence number: S71343
A;Recession: S71343
A;Status: nucleic acid sequence not shown
A;Accession: S71344
A;Status: nucleic acid sequence not shown
A;Accession: S71345
A;Cross-references: EMBL:D78589; NID:g1514956; PIDN:BAA11425.1; PID:g1514957
C;Superfamily: calreticulin
C;Keywords: calcium binding: endoplasmic reticulum
F;1-18/Domain: signal sequence #status predicted <AAT>
F;205-213/Region: nuclear location signal
F;415-418/Region: endoplasmic reticulum retention signal
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                                                                                                                       Gaps
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                                                                                                1 TDMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPD 60
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                   Length 406;
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                 Score 293; DB 2; Length 40
Pred. No. 1.9e-27;
4; Mismatches 5; Indels
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Pred. No. 7.5e-27;
3; Mismatches 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 2;
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                 86.2%;
85.2%;
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85.2%;
                                                         Conservative
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Best Local Similarity
Matches 52; Conserva
                                      l Similarity
52; Conserv
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61 N 61

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Query Match

C; Accession: \$25851; T33996 R; Smith, M.J.

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A; Accession: 5.285.1
A; Status: preliminary
A; Molecule type: DNA
A; Reversion: 1.95 < SM1.
A; Cross-reterences: EMBL.X59589; NID:g6693; PIDN:CAA42159.1; PID:g6694
A; Rever, C.; Courtney, L.; Laplant, Y.
A; Hauer, C.; Courtney, L.; Laplant, Y.
A; Reverance number: 221453
A; Reverance number: 221453
A; Reverance number: 221453
A; Reverance type: DNA
A; Re
R;Smith, M.J.
DNA Seg. 2, 235-240, 1992
A;Title: AC. elegans gene encodes a protein homologous to mammalian calreticulin.
A;Reference number: 825851; MUID:92329978
A;Reference number: 825851
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cistolin - beet
C;Species: Beta vulgaris (beet)
C;Species: Beta vulgaris (beet)
C;Species: 20-sep-1999 #sequence_revision 20-Sep-1999 #text_change 20-Jun-2000
C;Accession: T14554
R;Viereck, R.

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Job time: 189 sec
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APPLICANT: Coughlan, Sean J.
APPLICANT: Winfrey, Jr., Ron J.
TITLE OF INVENTION: CALRETICULIN AND CALNEXIN GENES AND PROMOTER REGIONS AND NUMBER OF SEQUENCES: 16
CORRESPONDENCE ADDRESS:
ADDRESSEE: Seed and Berry
STREET: 701 Fifth Ave. Suite 6300
CITY: Seatile
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                                                                                                                         Sequence 10, P
Sequence 10, P
Sequence 11, P
Sequence 5, Ap
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                                                                                                                                                                                                                                                                        Sequence 47, 1
Sequence 2, Apply Sequence 3, Apply Sequence 47, Apply
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55.3%; Pred. No. 2e-51;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/675,816
FILING DATE: 05-JUL-1996
CLASSIFICATION: 435
US-08-184-009-120
US-08-458-356-120
US-08-480-604A-10
US-08-405-496A-10
US-08-915-136-11
US-08-946-914-11
US-08-946-914-11
US-08-915-136-10
US-08-245-511-47
US-08-245-511-2
US-07-946-507-2
US-07-946-507-2
US-08-601-891-2
US-08-601-891-2
US-08-601-891-2
US-08-601-891-2
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ATTORNEY/AGENT INFORMATION:
NAME: NO. 6171864 tenburg, Carol
REGISTRATION NUMBER: 33.317
REFERENCE/DOCKET NUMBER: 750027.41
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206-622-4990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-675-816-2
Sequence 2, Application US/08675816
Patent No. 6171864
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           31;
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INFORMATION FOR SEQ ID NO: 2
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COUNTRY: U.S.A.
ZIP: 98104-7092
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US-08-675-816-2
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                                                                                                                                                                                                          Search time 38.34 Seconds (without alignments) 105.649 Million cell updates/sec
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Sequence 48, A
Sequence 48, A
Sequence 53, A
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Sequence 2,
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Sequence 8,
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Sequence 5
Sequence 5
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Sequence
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/cgn2_6/ptcdata/2/iaa/5B_COMB.pep:*
/cgn2_6/ptcdata/2/iaa/6A_COMB.pep:*
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                                  4.5
Compugen Ltd
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US-08-26-362-2
US-08-101.706-8
US-09-111.706-8
US-09-458-791-8
US-08-455-71-48
US-08-946-05-8
US-08-946-026-53
US-08-96-68
US-08-96-53
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US-08-91-287-5
US-09-021-287-5
US-09-240-473-5
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5-08-486-273A-56

5-08-40-086A-56

5-08-152-922A-5

5-08-16-604A-20

5-08-16-16-20

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5-08-49-64-21
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US-08-915-136-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of hits satisfying chosen parameters:
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                                     GenCore version
Copyright (c) 1993 - 2000
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Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                        protein search, using sw model
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Gapop 10.0 , Gapext 0.5
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length: 2000000000
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Query Match

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Minimum DB Maximum DB

Database

Total number

Searched:

Perfect score:

Sequence:

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                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
APPLICANT: Thomas, David Y.
APPLICANT: Thomas, David Y.
APPLICANT: Thomas, David Y.
APPLICANT: Thomas, David Y.
APPLICANT: Wada, Ikuo
TITLE OF INVENTION: METHODS OF DETECTION AND TREATMENT OF
TITLE OF INVENTION: PROTEIN PRODUCTION
TITLE OF INVENTION: THE OFFICE OF THE OFFICE OFFICE OF THE OFFICE OFFICE OF THE OFFICE OFFI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .,
125 SRAKHHAISAKLNKPFLFDTKPLIVQYEVNFQNGIECGGAYVKLLSKTPELNLDQ--FHD 182
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   53 QDARFYALSASF-EPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPN----SLDQTDMHG 107
                                                                                                                    121 GPGTKKVHVIENYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSL 179
                                                                                                                                                                        4 VYFKEQFIDGDGWTSRWIESKHKSD----FGKFVLSSGKFYGDEEK-----DKGLQTS 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Querry Match 29.9%; Score 290; DB 1; Length 593; Best Local Similarity 38.1%; Pred. No. 2.1e-24; Matches 77; Conservative 26; Mismatches 65; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
COMPUTER: IBM PC Compatible
COMPATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/296,362
FILING DATE: 25-AUG-1994
CLASSEIGATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: DOWNEY, MANUA S.
REGISTRATION NUMBER: 590066,401C1
TELECOMMUNICATION INFORMATION:
MENT STATEMENCE/DOCKET NUMBER: 690066,401C1
TELECOMMUNICATION INFORMATION:
MENT STATEMENCE/DOCKET NUMBER: 690066,401C1
                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 2, Application US/08296362
Putent No. 5691306
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TELERAX: (206) 682-6031
TELEX: 3723836
INFORMATION FOR SEQ ID NO: 2: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                : 593 amino acids amino acids
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MEDIUM TYPE: Floppy
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GENERAL INFORMATION:
APPLICANT: Coughlan, Sean J.
APPLICANT: Winfrey, Jr., Ron J.
TITLE OF INVENTION: CALRETICULIN AND CALNEXIN GENES AND PROMOTER REGIONS AND US
NUMBER OF SEQUENCES: 16
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10;
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Patent No. 6130068
GENERAL INFORMATION:
APPLICANT: Melanie K. Spriggs, Michael R. Comeau,
APPLICANT: Melanie K. Spriggs, Michard S. Johnson
TITLE OF INVENTION: VIRAL ENCODED SEMAPHORIN PROTEIN
TITLE OF INVENTION: RECEPTOR DNA AND POLYPEPTIDES
                                                                                                                                                                                                                                                                                                                                                SUFTWARE: PATENTIN RELEASE #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/675,816
FILING DATE: 05-JUL-1996
CLASSIFICATION: 435
ATTOMOREY/AGENT ....
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          24; Mismatches
                                                                                                                                                                                                    ADDRESSEE: Seed and Berry
STREET: 701 Fifth Ave. Suite 6300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTORNEY AGENT INFORMATION:
NAME: No. 6171864tenburg, Carol
REGISTRATION NUMBER: 39,317
REFERENCE/DOCKET NUMBER: 750027
TELECOMMUNICATION:
TELEPHONE: (206-622-4900
US-08-675-816-6; Sequence 6, Application US/08675816; Patent No. 6171864
                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIble
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CORRESPONDENCE ADDRESS:
ADDRESSEE: Janis C. Henry
STREET: 51 University St.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEFAX: (206)-682-6031
INFORMATION FOR SEQ ID NO: 6:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE CHARACTERISTICS:
LENGTH: 542 amino acids
TYPE: amino acid
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                                                                                                                                                                                                                           STREET: 701 Fifth CITY: Seattle STATE: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: MS-DOS/Windows 95
SOFTWARE: Word for Windows 95, 7.0a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: Henry, Janis C
REGISTRATION NUMBER: 34,347
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STREET: 51 University St.
CITY: Seattle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 162 DNTYEVKIDNSQVESGSLE 180
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ZIP: 98101
COMPUTER READABLE FORM:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1:1 | 1:5 | 1.1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 
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Patent No. 6174689
GENERAL INFORMATION:
APPLICANT: Spriggs, Melanie
TITLE OF INVENTION: VIRAL ENCODED SEMAPHORIN PROTEIN
RECEPTOR DNA AND POLYFEPTIDES
                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/958,598 (converted to a APPLICATION NUMBER: Provisional, see below)
FILING DATE: October 28, 1997
                                                                                           MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
AUPLICATION DATE: US/09/181,706
FILING DATE: October 28, 1998
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CORRESPONDENCE ADDRESS:
ADDRESSEE: Annis C. Henry
STREET: 51 University St.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE/DOCKET NUMBER: 26
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: (206)233-0644
INFORMATION FOR SEQ ID NO: 8:
SEQUENCE CHARACTERISTICS:
LENGTH: 660 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         162 DNTYEVKIDNSOVESGSLE 180
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TELEFAX: (206)233-0644
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Best Local Similarity 20.6%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOLECULE TYPE: protein US-09-181-706-8
                                      ZIP: 98101
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CITY: Seattle
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                               98101
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62 ASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICG 121
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-459-066-8
Sequence 8, Application US/09459066
Patent No. 6187909
GENERAL INFORMATION:
APPLICANT: Spridgs, Melanie
TITLE OF INVENTION: VIRAL ENCODED SEMAPHORIN PROTEIN
TITLE OF INVENTION: RECEPTOR DNA AND POLYPEPTIDES
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPALIBLE
OPERATING SYSTEM: MS-DOS/Windows 95
SOFTWARE: Word for Windows 95, 7.0a
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/458,791
                                                                                                                                                                     FILING DATE: 10-Dec-1999
CLASSIFICATION: <Unknown>
PRIOR APPLICATION NUMBER: 08/958,598
FILING DATE: 28-0CT-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY: linear

MOLECULE TYPE: protein

SEQUENCE DESCRIPTION: SEQ ID NO: 8:
US-09-458-791-8
                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE/DOCKET NUMBER: 2631
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206)470-4189
TELEFAX: (206)233-0644
INFORMATION FOR SEQ ID NO: 8:
SEQUENCE CHARACTERISTICS:
LENGTH: 661 amino acids
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ORGANISM: Streptococcus pneumoniae IMMEDIATE SOURCE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               from GENBANK
      FILING DATE: 01-SEP-1994
ATTORNEY/AGENT INFORMATION:
NAME: Jackson Esq., David A.
REGISTRATION NUMBER: 26,742
                                                                   REGISTRATION NUMBER: 26,742
REFERENCE/POCKET UMBER: 600
TELECOMMUNICATION:
TELEPHONE: 201 487-5800
                                                                                                                              TELEPHONE: 201 487-5800
TELEFAX: 201 343-1684
TELEX: 13521
INFORMATION FOR SEQ ID NO: 48:
SEQUENCE CHARACTERISTICS:
LENGTH: 642 amino acids
TYPE: amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OTHER INFORMATION: sequen
OTHER INFORMATION: from G
PUBLICATION INFORMATION:
AUTHORS: Alloing, et al.
JOURNAL: MOI. MICROBIOI.
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MOLECULE TYPE: peptide
HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OTHER INFORMATION:
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DATE: 1990
US-08-245-511-48
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ouery Match 9.2%; Score 89; DB 4; Length 660; Best Local Similarity 20.6%; Pred. No. 0.14; Matches 41; Conservative 25; Mismatches 91; Indels
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GENERAL INFORMATION:

APPLICANT: Measure, H Robert

APPLICANT: Pearce, Barbara J

APPLICANT: Tuomanen, Elalae

APPLICANT: Tuomanen, Elalae

TITLE OF INVENTION: ACELLULAR VACCINES BASED THEREON

NUMBER OF SEQUENCES: 58

NUMBER OF SEQUENCES: 58

CORRESPONDENCE ADDRESS:

ADDRESSEE: All Hackensack Avenue

CITY: Hackensack

STATE: New Jersey

COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFFMARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                     APPLICATION NUMBER: US/09/459,066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/116,541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US/08/245,511
FILING DATE: 18-MAY-1994
CLASSIFICATION: 424
                                    FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/958,598
FILING DATE:
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-245-511-48; Sequence 48, Application US/08245511; Patent No. 5928900
                                                                                                                                                              NAME: Honry, Janis C
REGISTRATION NUMBER: 34,347
REFERENCE/DOCKET NUMBER: 2631
THIRCOMMUNICATION INFORMATION:
TELEPHONE: (206)470-4189
THIEFAX: (206)233-0644
INFORMATION FOR SEQ ID NO: 8:
SEQUENCE CHARACTERISTICS:
LENGTH: 660 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         162 DNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NTIYSFDTKSKQTRSAQVD 627
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY: Incar
) MOLECULE TYPE: protein
US-09-459-066-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
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NOTE: the reference contains a sequence error; the correct sequence shown below is obtain
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         65 EPFSNKGOTLVVQFTVKH-----EQNIDCGG-GYVKLFPNSLDQT---DMHGDSEY 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     16 WTSR-----W----IESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYALSASF 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                             55;
                                                                                                                                                                                                                                                                                                                                                                                          Length 642;
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Sequence 48, Application US/08600993A
Sequence 48, Application US/08600993A
Sequence 48, Application US/08600993A
Sequence 48, Application US/08600993A
GENERAL INFORMATION:
APPLICANT: Masure, H Robert
APPLICANT: Tuomanen, Elaine
TITLE OF INVENTION: BACTERIAL EXPORTED PROTEINS AND TITLE OF INVENTION: ACCLULAR VACCINES BASED THEREON NUMBER OF SEQUENCES: 59
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             112 NIMFGPDICGPGTKKVHVIFNYKG------KNVLINKDIR---
                                                                                                                                                                                                                                                                                                                                                                                   Query Match 8.0%; Score 77.5; DB 2; Best Local Similarity 21.2%; Pred. No. 2.6; Matches 42; Conservative 20; Mismatches 81;
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APPLICANT: Reed, Steven G.
APPLICANT: Dillon, Davin C.
APPLICANT: Twardzik, Daniel R.
APPLICANT: Twardzik, Daniel R.
APPLICANT: Mitcham, Jennifer L.
TILLE OF INVENTION: COMPOUNDS AND METHODS FOR IMMUNOTHERAPY
TITLE OF INVENTION: AND IMMUNODIAGNOSIS OF PROSTATE CANCER
TITLE OF INVENTION: AND IMMUNODIAGNOSIS OF PROSTATE CANCER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 77; DB 3; Length 15; Pred. No. 0.013; 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
APPLICANT: ARLETH, ANTHONY J.
APPLICANT: WILLETTE, ROBERT N.
APPLICANT: ELSHOURBAGY, NABIL A.
APPLICANT: LI, XIAOTONG
TITLE OF INVENTION: HUMAN CARDIAC/BRAIN TOLLOID-LIKE
TITLE OF INVENTION: PROTEIN
NUMBER OF SEQUENCES: 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA: 15/08/946,026 FILING DATE: 07-0CT-1997
                                                                                                                                                                                                                                  ADDRESSEE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 07-OCT-1997
CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: Maki, David J.
NAME: Maki, David J.
TRECISTRATION NUMBER: 31,392
REFERENCE/DOCKET NUMBER: 210121.424C1
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                         ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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100.08; Pre-
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEPHONE: (206) 622-4900
TELEFAX: (206) 682-6031
INFORMATION FOR SEQ. ID NO: 53:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM COMPATIBLE
OPERATING SYSTEM: DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 15 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 7.9
Best Local Similarity 100.
Matches 14; Conservative
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linear
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                                                                                                                                                                                                                                                                                                              Washington
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                        Seattle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19482
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-991-408-4
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AUTHORS: Alloing, et al.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              æ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                65 EPFSNKGQTLVVQFTVKH------EQNIDCGG-GYVKLFPNSLDQT---DMHGDSEY 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   220 EQYWDKENVHLDTINLAYYDGSDQESLERNFTSGAYSYARLYPTSSNYSKVAEEYKDNIY 279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         112 NIMFGPDICGPGTKKVHVIFNYKG------KNVLINKDIR-------- 145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       280 YTQSGSGIAGLGVNIDRQSYNYTSKTTDSEKVATKKALLNKDFRQALNFALDRSAYSAQI 339
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 8.0%; Score 77.5; DB 2; Length 642; Best Local Similarity 21.2%; Pred. No. 2.6; Matches 42; Conservative 20; Mismatches 81; Indels 5
                  MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
COMPUTER: TBM PC COMPATIBLE
CORRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/600,993A
FILING DATE: 1-MAR-1996
CLASSIFICATION DATA:
APPLICATION NUMBER: US 08/245,511
FILING DATE: 18-MAY 1994
CLASSIFICATION NUMBER: US 08/245,511
FILING DATE: 18-MAY 1994
FLICH APPLICATION DATA:
APPLICATION NUMBER: US 08/245,511
FILING DATE: US 08/245,511
APPLICATION NUMBER: US 08/245,511
FILING DATE: US 08/245,511
APPLICATION UNBER: US 08/245,511
APPLICATION UNBER: US 08/245,511
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: Jackson Esq., David A. REGISTRATION NUMBER: 26,742 REFERENCE/DOCKET NUMBER: 600-1-069 US TELECOMMUNICATION INFORMATION: TELEPHONE: 201 487-5800 TELEFAX: 201 343-1684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Streptococcus pneumoniae
IMMEDIATE SOURCE:
CLONE: amiA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEX: 133521
INFORMATION FOR SEQ ID NO: 48:
SEQUENCE CHARACTERISTICS:
LENGTH: 642 amino acids
TYPE: amino acid
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340 NGKDGAALAVRNLFVKPD 357
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  COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PAGES: 633-644
; DATE: 1990
US-08-600-993A-48
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US-08-946-026-53
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FILING DATE:
CLASSIFICATION
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/866,650
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE/DOCKET NUMBER: 96
TELECOMMUNICATION INFORMATION:
TELEPHONE: 608-251-5000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION:
NAME: Berson, Bennett J
REGISTRATION NUMBER: 37094
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                                                                                                                                Ouery Match
Best Local Similarity 31.4%;
    LENGTH: 1013 amino acids TYPE: amino acid
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                                          TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-866-650-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ZIP: 53703
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; MOLECULE TYPE: protein US-09-021-287-5
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Matches 33; Conserva
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                18; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 7.7%; Score 75; DB 3; Length 591; Best Local Similarity 31.4%; Pred. No. 4.5; Matches 33; Conservative 15; Mismatches 39; Indels
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MEDIUM TYPE: Floppy disk
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Rolease #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/866,650
FILLING DATE:
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 5, Application US/0886650
Patent No. 593931
GENERAL INFORMATION:
APPLICANT: Greenspan, Daniel S
APPLICANT: Takahara, Kazuhiko
APPLICANT: Hoffman, Guy G
TITLE OF INVENTION: Mammalian Tolloid-Like Protein
NUMBER OF SEQUENCES: 13
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               960296.93839
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/991,408
FILING DATE:
CLASSIFFICATION:
PHUR APPLICATION DATA:
APPLICATION UNDER: 60/034,471
FILING DATE: 02-JAN-1997
ATTOKNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STARET: Quarles 6 Brady
STREET: 1 South Pinckney Street
CITY: Madison
STARE: WI
COUNTRY: US
XIP: 53703
                                                                                                                                                      NAME: PRESTIA, PAUL F
REGISTRATION NUMBER: 23,031
REFERENCE/DOCKET NUMBER: ATG-
TELECOMMUNICATION INFORMATION:
TELEPHONE: 610-407-0700
TELEPHONE: 610-407-0701
                                                                                                                                                                                                                                                         TELLETAX: 610-407-0701
TELEX: 846169
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 591 amino acids
TYPE: amino acids
STRANDEDNESS: single
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REGISTRATION NUMBER: 37094
REFERENCE/DOCKET NUMBER: 96
TELECOMMUNICATION INFORMATION:
TELEPHONE: 608-251-5000
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INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                             ; MOLECULE TYPE: protein
US-08-991-408-4
                                                                                                                                                                                                                                                                                                                                                                                               linear
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US-08-866-650-5
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68 SNKGQTLVVQF-TVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICGPG-TK 125
                                                                                                                                         923 SERGSRLELSFQTFEVEEEADCGYDYVELF-DGLDSTAV-GLGRF-------CGSGPPE 972
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DB 2; Length 1013;
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                                                                                                                                                                                                                                                               973 EIYSI----GDSVLIHFHTDDTINKKGFHIRYKSIRYPDTTHTKK 1013
                                                                                                                                                                                                                            126 KVHVIFNYKGKNVLI -- NKDIRCKDDEFTHLYTLIVRPDNTYEVK 168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
APPLICANT: Greenspan, Daniel S
APPLICANT: Takahara, Kazuhiko
APPLICANT: Hoffman, Guy G
TITLE OF INVENTION: Mammalian Tolloid-Like Protein
NUMBER OF SEQUENCES: 13
CORRESPONDENCE ADDRESS:
ADDRESSEE: Quarles & Brady
STREET: I South Pinckney Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDIUM TYPE: Floppy disk
COMPUTER: 1BM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/021,287
7.7%; Score 75; DB 3
31.4%; Pred. No. 9.7;
tive 15; Mismatches
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RESULT 15
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126 KVHVIFNYKGKNVLI--NKDIRCKDDEFTHLYTLIVRPDNTYEVK 168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 126 KVHVIFNYKGKNVLI--NKDIRCKDDEFTHLYTLIVRPDNTYEVK 168
                                                                                                                                                                                                                                       HUMAN CARDIAC/BRAIN TOLLOID-LIKE PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/991,408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 7.7%; Score 75; DB Best Local Similarity 31.4%; Pred. No. 9.7; Matches 33; Conservative 15; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATG-50038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 60/034,471
FILING DATE: 02-JAN-1997
ATORNEY/ACENT INFORMATION:
NAME: PRESTIA, PAUL F
REGISTRATION NUMBER: 23.031
REFERENCE/DOCKET NUMBER: ATG-500
TELECOMMUNICATION INFORMATION:
TELEFONE: 610-407-0700
                                                                                                                                                                              APPLICANT: ANLETH, ANTHONY J.
APPLICANT: WILLETTE, ROBERT N.
APPLICANT: ELSHOURBAGY, NABIL A.
APPLICANT: LI, XIAOTONG
TITLE OF INVENTION: HUMAN CARDIAC,
TITLE OF INVENTION: PROTEIN
MUMBER OF SEQUENCES:
ADDRESSEE: RATNER & PRESTIA
STREET: P.O. BOX 980
CITY: VALLEY FORGE
STATE: PA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 5, Application US/09240473
Patent No. 6297011
GENERAL INFORMATION:
APPLICANT: Greenspan, Daniel S
                                                                                                                           Sequence 2, Application US/08991408
Patent No. 6008017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEX: 846169
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 1013 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                               ZIP: 19482
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                               USA
                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-08-991-408-2
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Sequence 56, Application US/08231193A
Patent No. 5843895
GENERAL INFORMATION:
APPLICANT: Daggett, Lorrie P.
APPLICANT: Liaw, Chen W.
APPLICANT: Liaw, Chen W.
APPLICANT: Lu, Chin-Chun
TITLE OF INVENTION: SUBUNITS, NUCLEIC ACTDS ENCODING SAME AND USES THEREFOR NUMBER OF SEQUENCES: 63
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   68 SNKGQTLVVQF-TVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICGPG-TK 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 923 SERGSRLELSFQTFEVEEEADCGYDYVELF-DGLDSTAV-GLGRF------CGSGPPE 972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    18;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         126 KVHVIFNYKGKNVLI -- NKDIRCKDDEFTHLYTLIVRPDNTYEVK 168
                    APPLICANT: Hoffman, Guy G
TTLE OF INVENTION: Mammalian Tolloid-Like Protein
NUMBER OF SEQUENCES: 13
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
                                                                                                                                                                                                                                      COMPUTER READBLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARR: Patentin Release #1.0, Version #1.30
APPLICATION DATA:
APPLICATION NUMBER: US/09/240,473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 75; DB 4;
Pred. No. 9.7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE: Brown, Martin, Haller & McClain
STREET: 1660 Union Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 960296.93839
                                                                                                   ADDRESSEE: Quarles & Brady
STREET: 1 South Pinckney Street
CITY: Madison
APPLICANT: Takahara, Kazuhiko
                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME: Berson, Bennett J
REGISTRATION NUMBER: 37094
REFERENCE/DOCKET NUMBER: 96
TELECOMMUNICATION INFORMATION:
TELEPHONE: 608-251-5000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 7.7%;
Best Local Similarity 31.4%;
Matches 33; Conservative 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEFAX: 608-251-9166
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1013 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                         CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY: linear
MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDAL
STREET: local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY: U.S.A. ZIP: 92101-2926
                                                                                                                                                    CILL.
STATE: WL
COUNTRY: US
The 53703
                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-231-193A-56
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH:
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CURRENT APPLICATION DATA:

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CLASSIFICATION LONG US APPLICATION DATE: 20-APPLICATION DATE: 20-APPLICATION DATE: 20-APPLICATION NUMBER: US 08/052,459
FILING DATE: 20-APPLICATION: 536
ATTORNEY/AGENT INFORMATION:
NAME: Soldman Stephanie
REGISTRATION NUMBER: 632-9383
FEREPRENCE/COCKET NUMBER: 632-9383
FEREPRENCE/COCKET NUMBER: 632-9383
FEREPRENCE/COCKET NUMBER: 636-9383
FEREPRONE CHARACTERION: 556:
SEQUENCE CHARACTERITICS:
LENGTH: 1404 amile acid
TOPOLOGY: Incear
MOLECULE TYPE: protectin
US-08-21-193A-56
```

Swarch completed: January 9, 2002, 14:59:42 Job time: 69 sec

6 cy

Db 1325 KDKGRFWDGSPYAHMFEMSAGESTFANNKSSVP---TAGHHHHNNPGGGYMLSKSLYPDR 1381

Querry Match
7.5%; Score 72.5; DB 2; Length 1484;
Best Local Similarity 27.7%; Pred. No. 32;
Matches 23; Conservative 13; Mismatches 28; Indels 19; Gaps

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9, 2002, 14:58:53; Search time 43.73 Seconds (without alignments) 313.547 Million cell updates/sec
                                                                                                                                                                             US-09-828-000-3
971
1 EPAVYFKEQFLDGDGWTSRW......PDNŸYEVKIDNSQVESGSLE 180
GenCore version 4.5
Copyright (c) 1993 - 2000 Compugen Ltd.
                                                                                                                                                                                                                                                                                                            219241 seqs, 76174552 residues
                                                                      - protein search, using sw model
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Gapop 10.0 , Gapext 0.5
                                                                                                         January
                                                                                                                                                                               Title:
Perfect score:
Sequence:
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                                                                    OM protein
                                                                                                                                                                                                                                                                                                              Searched:
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Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

219241

Total number of hits satisfying chosen parameters:

seq length: 0 seq length: 2000000000

Minimum DB 8 Maximum DB 8

Database :

PIR_68:* 1: pirl:* 2: pir2:* 3: pir3:* 4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

calreticulin, brain calreticulin, precu calreticulin precu calreticulin precu calreticulin precu calreticulin precu calreticulin precu calreticulin - bar calreticulin - cas calreticulin calreticulin cas calreticulin calleticulin calleticulin calleticulin calreticulin calreticulin calreticulin calreticulin calreticulin calreticulin calreticulin calreticulin calleticulin calleticulin calleticulin calreticulin calreticulin calleticulin calleti calnexin precursor calnexin - human calnexin precursor calnexin precursor calreticulin precu calreticulin precu calreticulin precu hypothetical prote calreticulin autoa probable calreticu calnexin precursor Description SUMMARIES S36799 T16968 A37047 % Query Match Length DB Result

calmegin precursor	calcium-binding pr	calnexin-t - mouse	calnexin homolog S	hypothetical prote	calnexin-like prot	calnexin - soybean	probable calnexin	calnexin homolog -	calreticulin, uter	calreticulin, slow	calreticulin, brai	calnexin homolog Y	calnexin homolog C	calnexin - maize (
A53418 S71342	S56142	A54086	A46637	S40938	JN0597	T06415	T10892	T49873	E33208	C33208	D33208	S29347	S70552	T03251
0 0	~	~	7	7	7	7	7	~	~	7	7	~	~	7
611	260	611	582	619	530	546	540	532	29	29	53	502	297	428
27.8	26.1	26.0	25.5	25.1	24.6	23.9	22.2	20.6	16.2	14.9	14.8	13.7	13.3	12.8
270	253.5	252	248	244	238.5	232	215.5	200.5	157	145	144	133.5	129	124.5
30	32	33	34	35	36	37	38	39	40	41	42	43	44	45

ALIGNMENTS

 RESULT 1
 calleticulin precursor - human N.Alternate names: 52K ribonucleoprotein autoantigen Ro/SS-A; 60K integrin-binding pr
 C:Speciaes: Homo saplems (man) C:Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 18-Feb-2000 C:Accession: A4230; A37047; A46452; A28812; PH1525; A40346; S11475; T45075 R:McCauliffe, D.P.; Yang, Y.S.; Wilson, J.; Sontheimer, R.D.; Capra, J.D.
 J. BIOI. Chem. 26/, 255/-2562, 1992 A;Title: The 5'-flanking region of the human calreticulin gene shares homology with t A;Ritle: A4.78ference number: A42330; MUID:92129342
 A;Accession: A42330 A;Molloue Lype: DNA A:Residines: 1-417 <mc2></mc2>
A;Note: sequence extracted from NCBI backbone (NCBIN:78537, NCBIP:78536) R;NcCauliffe, D.P.; Liux, F.A; Lieu, T.S.; Sanz, I.; Hanke, J.; Newkirk, M.M.; Bachin
O. Clin. INVESC. 03, 13/7-131, 139, A. A. A. Title: Molecular cloning, expression, and chromosome 19 localization of a human Ro/A;Title: Molecular cloning, expression, and A;Reference number: A37047; MUID:90237213
A; Accession: A37047 A: Wolecule type: mRNA
 A; Residues: 1.41/ <mcc. a:="" aaa36582.1;="" cross-references:="" g337486;="" g337487<="" gb:="" m32294;="" nid:="" pid:="" pidn:="" td=""></mcc.>
A; NOCe:ne. Authors translated the codon GTA for residue 349 as Tyr R; Rokeach, L.A.; Haselby, J.A.; Meilof, J.F.; Smeenk, R.J.; Unnasch, T.R.; Greene, B.
 J. Immunol. 141, 3031-3035, 1551 A;Title: Characterization of the autoantigen calreticulin.
A; Accession: A46452
 A,Molecule type: mRNA A,Residues: 1-417 <rok></rok>
 A;Cross-references: GB:M84739; NID:g179881; PIDN:AAA51916.1; PID:g179882 A:Note: sequence extracted from NCBI backbone (NCBIN:60749, NCBIP:60750)
 R.Lieu, T.S.; Newkirk, M.M.; Capra, J.D.; Sontheimer, R.D.
 A:Title: Molecular characterization of human Ro/SS-A antigen. Amino terminal sequence
 A;Reference number: A28812; MUID:882/3610 A;Accession: A28812
 A;Wolecule type: protein A:Residues: 18-41 <lie></lie>
K;Dupuis, M.; Schaerer, E.; Krause, K.H.; Tschopp, J. J. Exo. Med. 177, 1-7, 1993
A; Title: The calcium-binding protein calreticulin is a major constituent of lytic gra A; Reference number: PH1525; MUID:93115648
 A; Accession: PH1525
 A;Molecule type: protein A;Residues: 18-27 <dup></dup>
 A;Experimental source: LAK cell R;Rojiani, M.V.; Finlay, B.B.; Gray, V.; Dedhar, S.
 Biochemistry 30, 9859-9866, 1991 A;Title: In vitro interaction of a polypeptide homologous to human Ro/SS-A antigen (c

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R.Murthy, K.K.; Banville, D.; Srikant, C.B.; Carrier, F.; Holmes, C.; Bell, A.; Patel Nucleic Acids Res. 18, 4933, 1990
A.Title: Structural homology between the rat calreticulin gene product and the Onchoc A; Reference number: S11205; MUD:90370496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A,Molecule type: mRNA
A;Reafudes: 'R',270-758,'AAG' <LON>
A;Reafudes: 'R',270-758,'AAG' <LON>
A;Reafudes: 'R',270-758,'AAG' <LON>
Cross-references: EMBL:X13702; NID:956055; PIDN:CAA31987.1; PID:9930260
A;Note: the authors designated the protein as D-beta hydroxybutyrate dehydrogenase
R;Yokoi, T.; Nagayama, S.; Kajiwara, R.; Kawaguchi, Y.; Horluchi, R.; Kamataki, T.
Bjochim. Biophys. Acta 1158, 339-344, 1993
A;Title: Identification of protein disulfide isomerase and calreticulin as autoimmune
A;Reference number: S39371; MUID:94072621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A. Experimental source: testis, strain Sprague-Dawley
R. Scennichsen, B.; Fuellekrug, J.; van Nguyen, P.; Diekmann, W.; Robinson, D.G.; Mies
submitted to the EMBL Data Library, May 1994
A. Description: Retention and retrieval: both mechanisms cooperate to maintain calreti
A. Reference number: $45036
A. Accession: $45036
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A; Recession: $13045
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Molecule type: protein
A; Molecule type: B-23, "x', 25-32 < yrox>
A; Residues: 18-23, "x', 25-32 < yrox>
J. Biol. Chem. 264, 17494-17501, 1989
A; Title: Pour intractisternal calcium-binding glycoproteins from rat liver microsomes
1.11ve calcium sequestering rat liver vesicles.
A; Reference number: A34473; MUID:900008920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                            A; Molecule type: mRNA
A; Realdues: 1-416 <MURX
A; Realdues: 1-416 <MURX
A; Realdues: 1-416 <MURX
A; Cross-references: EMBL: X53363; NID:q55854; PIDN:CAA37446.1; PID:q55855
A; Cross-references: EMBL: X53363; NID:q55855
B; Nakamura, M.; Michikawa, Y.; Baba, T.; Okinaga, S.; Arai, K.
Biochem. Biophys. Res. Commun. 186, 668-673, 1992
A; Title: Calreticulin is present in the acrosome of spermatids of rat testis.
A; Reference number: PC1109; MUID:92360010
A; Accession: PC1109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Cross-references: EMBL:X79327; NID:9488840; PIDN:CAA55890.1; PID:9488841 R;Lone, Y.C.; Bailly, A.; Latruffe, N submitted to the EMBL Data Library, December 1988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
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F;413-416/Region: endoplasmic reticulum retention signal
F;344/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Molecule type: protein
A; Residues: 18-29 <TRE>
C; Superfamily: calreticulin
C; Keywords: calculum binding; glycoprotein
F;1-17/Domain: signal sequence *status predicted <SIG>F;18-416/Product: calreticulin *status experimental <MAT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           96.1%; Score 933; DB 2; 1
94.4%; Pred. No. 8.8e-77;
ive 5; Mismatches 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R;Treves, S.; de Mattei, M.; La
Biochem. J. 271, 473-480, 1990
A;Title: Calreticulin is a cand
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Reference number: S04867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: protein A; Residues: 18-32 <NAK2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Molecule type: protein A; Residues: 18-36 <VAN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-416 <SOE>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Accession: S04867
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Matches 170;
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                                                            A; Reference number: A40346; MUID:92002034
A; Accession: A40346
A; Molecule type: protein
A; Residues: 18-34, 'R' <R03>
A; Krause, K.H.; Simmerman, H.K.B.; Jones, L.R.; Campbell, K.P.
B; Krause, K.H.; Simmerman, H.K.B.; Jones, L.R.; Campbell, K.P.
B; Krause, R.H.; Simmerman, H.K.B.; Jones, L.R.; Campbell, K.P.
B; Coresiden J. 270, 545-548, 1990
A; Tille: Sequence similarity of calreticulin with a Ca(2+)-binding protein that co-purif
A; Reference number: S11475; MUID:90380058
A; Molecule type: protein
A; Residues: 18-32 <AKRA>
A; Molecule type: protein
A; Residues: 18-32 <AKRA>
A; Molecule type: Data Library, November 1996
A; Westfues: Data Library, November 1996
A; Nestription: Characterization by genomic sequence analysis of a gene-rich 111 kb regic
A; Reference number: 222906
A; Reference number: 2229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Calrettoulin precursor - rat

N.Alternate names: calcium-binding protein 3

S.Specials: Rattus norvedgicus (Norway rat)

C.Specials: Rattus norvedgicus (Normay rat)

C.Specials: Rattus (Normay rattus)

R.Natmura, M.; Normay M.; Baba, T.; Michikawa, Y.; Yamanobe, T.; Arai, K.; Okinaga, S.

Exp. Cell Res. 205, 101-110, 1993

A.Fitle: An endoplasmic reticulum protein, calreticulin, is transported into the acrosom A.Reference number: A49176; MUID:93202172

A.A.Corsaston: HOBB19

A.A.Corsaston: HOBB19

A.A.Corsastorier (Norway rattus)

A.A.Corsastorier (Norway rattus)

A.A.Corsastorier (Norway rattus)

A.A.Corsastorier (Norway rattus)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Residues: 1-417 <LAM>
A; Residues: 1-417 <LAM>
A; Cross-references: EMBL:AD000092; PIDN:AAB51176.1
A; Experimental source: cell line 5HL2-B; fibroblast
C; Comment: Autoantibodies specific for this protein are found in Sjogren's syndrome and C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Moleculo type: mRNA; protein
A; Residues: 1-416 <NA2>
A; Croмя-готегенсея: GB:D78308; NID:g1089798; PIDN:BAAll345.1; PID:g1845572
A; Experimental source: Sprague-Dawley, spermatogenic cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Cross-roferences: GDB:125179; OMIN:109091
A;Mup position: 19p13.3-19p13.2
A;Introns: 31/1; 65/1; 133/1; 164/3; 234/3; 272/3; 320/3; 351/3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C.Superfamily: calreticulin
C.Kwywords: calclum binding; integrin binding
E.1.17/Domain: signal sequence #status predicted <SIG>
F:18-417/Product: calreticulin #status predicted <MAT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 100.0%; Score 971; DB 1; Rewt Local Similarity 100.0%; Pred. No. 3.3e-80; Matches 180; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Accession: A49176
A; Status: preliminary
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an expressible cDNA clone encoding ERp60/ca
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N.Alternate names: 55K calcium-binding reticuloplasmin; calregulin C;Species: Mus musculus (house mouse)
C;Species: Mus musculus (house mouse)
C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999
C;Accession: S06763; J.444; PC1233; A57498
R;Smith, M.J.; Koch, G.L.E.
EMBO J. 8, 3581-3586, 1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 EPAVYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
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A;Cross-references: GB:M92988; NID:g193084; PIDN:AAA37569.1; PID:g193085
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J. Blol. Chem. 270, 15956-15929, 1995
A;Title: Cell surface calreticulin is a putative mannoside lectin which
A;Reference number: A57498; MUID:95332280
                                                A; Molecule type: mRNA
A; Residues: 45-63, E', 65-83 <LIU>
A; Experimental source: brain, clone 8.1
C; Superfamily: calreticulin
C; Superfamily: calcium binding; glycoprotein
E; 37-400/Region: endoplasmic reticulum retention signal
F; 120-146/Pisulfide bonds: #status experimental
F; 162/Binding site: carbohydrate (Asn) (covalent) #status experimental
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                                                                                                                                                                                                                                                                                                                                               Score 930; DB 2; Length 400;
Pred. No. 1.6e-76;
3; Mismatches 6; Indels
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A; Cross-references: EMBL:X14926; NID:g50567; PIDN:CAA33053.1;
B; Mazzarella, R.A.; Gold, P.; Cunningham, M.; Green, M.
Gene 120, 217-225, 1992
A; Title: Determination of the sequence of an expressible CDNA
A; Reference number: JC1444; MUID:93013037
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F;1-17/Domain: signal sequence #status predicted <SIG>
F;18-416/Product: calregulin #status experimental <MAT>
F;413-416/Region: endOplasmic reticulum retention signal
                           núcleic acid sequence not shown
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A; Residues: 74-80; 142-151; 186-193 <WHI>
                                                                                                                                                                                                                                                                                                                                                                                                            3;
                                                                                                                                                                                                                                                                                                                                               Query Match 95.8%;
Best Local Similarity 95.0%;
Matches 171; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           calreticulin precursor - mouse
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Molecule type: mRNA
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A:Accession: S36801
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Calreticulin precursor, skeletal muscle - rabbit

Calreticulin precursor, skeletal muscle - rabbit

Calreticulin precursor, skeletal muscle - rabbit

C; Species: Oryctologus cuniculus (domestic rabbit)

C; Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999

C; Accession: A34154; A33047

R; Filegel, L.; Burns, K.; MacLennan, D.H.; Reithmeier, R.A.F.; Michalak, M.

J; Blol. Chem. 264, 21522-21528, 1989

A; Filegel, L.; Burns, K.; MacLennan, D.H.; Reithmeier, R.A.F.; Michalak, M.

A; Filegel, L.; Burns, K.; MacLennan, D.H.; Reithmeier, R.A.F.; Michalak, M.

A; Filegel, L.; Burns, M.

A; Filegel, L.; Burns, M.

A; Reference number: A34154; MUID:90094320

A; Reference number: A34154; MID:91064858; PIDN:AA31188.1; PID:9164859

A; Cross references: GB:JO5138; NID:9164858; PIDN:AA31188.1; PID:9164859

B; Treves, S.; de Mattei, M.; Lanfredi, M.; Villa, A.; Green, N.M.; MacLennan, D.H.; Melc Biochem. J 271, 473-480, 1990

A; Reference number: S13045; MUID:91054414

A; Molecule type: protein

A; Residues: 19-32 CFRE>

C; Superfamily: calreticulin

C; Keywords: skeletal muscle

F; 1-17/Domain: signal sequence #status predicted <SIC>
F; 1-17/Domain: signal sequence

F; 1-17/Domain: signal sequence

F; 1-17/Domain: signal sequence
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R; Liu, N.; Fine, R.E.; Johnson, R.J.
Bicchim. Biophys. Acta 1202, 70-76, 1993
A; Title: Comparison of cDMS from bovine brain coding for two isoforms of calreticulin.
A; Reference number: S36799; MUID:93385184
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c;843376
calreticulin, brain isoform 1 - bovine
c;Species: Bos primingenius taurus (cattle)
c;Species: Doct-1994 #sequence_revision 23-Mar-1995 #text_change 07-May-1999
c;Accession: S43376; S36801
R;Matsuoka, K.; Seta, K.; Yamakawa, Y.; Okuyama, T.; Shinoda, T.; Isobe, T.
Biochem, J. 298, 435-442, 1994
A;Title: Covalent structure of bovine brain calreticulin.
A;Reference number: S43376; MUID:94183174
                                                      180
                                                                                                                                                                       SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
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                                                                                                                                         GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE
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                           SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC
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Pred. No. 1.3e-76;
1; Mismatches 7;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 95.9
Best Local Similarity 95.6
Matches 172; Conservative
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                           61
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K.; Gawinowicz, M.A.; Barzilai, A.; Karl,
                                                                        A Molecule type: protein
A Molecule type: protein
A Mesaldues: 'X',17-28, 'X',30-31 < KE2>
A Mesaldues: 'X',17-28, 'X',30-31 < Mezes
B Mesaldues: 'X',17-28, 'X',30-31 < Mezes
B Mesaldues: 'X',17-28, 'X',30-31 < Mezes
B Mesaldues: 'A Mesaldues: 'A Mesaldues' Mesaldues: 'A Mesaldues: 'A Mesaldues: 'A Mesaldues: 'A Mesaldues: 'A',17-28, 'X', '30-31 < Mesaldues: 'X',17-28, 'X', '30-31 < Mesaldues: 'X',17-28, 'X', '30-31 < Mesaldues: 'A',17-28, 'X', '30-31 < Mesa
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calreticulin (clone 8) - African clawed frog (fragment)
C;Species: Xenopus lacvis (African clawed frog)
C;Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 13-Aug-1999
C;Accession: S29130; T01068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICGPGTKKVHVIF 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16 DPTVYFKEEF--GDDWAERWVESKHKSDLGKFVLTAGKFYGDAEKDKGIQTSQDARFYGL 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12 DGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYALSASFEPFSNKG 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Residues: 1-339, XTGR' <TRW>
A;Cross_references: EMBL:X67598; NID:964610; PIDN:CAA47867.1; PID:964611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 EPAVYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 384;
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79.4%; Pred. No. 3.9e-65;
tive 18; Mismatches 17,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; Score 797; DB 2;
; Pred. No. 1.6e-64;
12; Mismatches 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ritreves, S.; Zorzato, F.; Pozzan, T.
Blochem. J. 287, 579-581, 1992
Afitle: Identification of calreticulin is A; Reference number: S29129; MUID:93074997
A; Accession: S29130
A;Reference number: A94207; MUID:88320566
A;Accession: B31409
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A;Status: translated from GB/EMBL/DDBJ
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85.2%;
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A) Residues: 1-384 <TRE>
A) Cross-references: EMBL:X67598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
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Matches 144; Conservative
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C, Superfamily: calreticulir
C, Keywords: glycoprotein
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Matches 143;
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NyAlternate names: protein 407
NyAlternate names: protein 407
Systems: Aplyata californica (California sea hare)
C;Species: 10-Sep-1999 *sequence_revision 10-Sep-1999 *text_change 10-Sep-1999
C;Accession: JH0795; B31409; F60977
K;Kennedy, T.E.; Kuhl, D.; Barzilai, A.; Sweatt, J.D.; Kandel, E.R.
Neuron 9, 1013-1024, 1992
A;Title: Long-term sensitization training in aplysia leads to an increase in calreticuli
A;Reference number: JH0795; MUID:93098937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Accession: JH0795
A; Mclecule type: mRNA
A; Mclecule type: mRNA
A; Mclecule type: mRNA
A; Mclecule type: mRNA
A; Westduces: 1-405 < KEN>
A; Cross-references: GB:S51239; NID:9262053; PIDN:AAB24569.1; PID:9262054
A; Experimental source: abdominal ganglion and antral nervous system
B; Kennedy, T.K.; Gawinowicz, M.A.; Barzilai, A.; Kandel, E.R.; Sweatt, J.D.
Proc. Natl. Acad. Sci. U.S.A. 85, 7008-7012, 1988
A; Title: Sequencing of proteins from two-dimensional gels by using in situ digestion and tion in Aplysia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C. Accession: S29129
R:Treves, S.; Zorzato, F.; Pozzan, T.
Biochem. J. 287, 579-581, 1992
A:Title: Identification of calreticulin isoforms in the central nervous system.
A:Title: Identification of calreticulin isoforms in the central nervous system.
A:Recession: S29129
A:Residues: 1-411 CTRS
A:Cross-references: EMBL:X67597; NID:g64608; PIDN:CAA47866.1; PID:g64609
C.; Superfaulty: calreticulin
C; Reywords: qlycoprotein
F:1-12/Domain: signal sequence (fragment) *status predicted <SIG>F:13-411/Product: calreticulin *status predicted <AMATS
F:13-411/Product: calreticulin *status predicted <AMATS
F:339/Binding site: carbohydrate (Asn) (covalent) *status predicted
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              calreticulin precursor (clone 3) - African clawed frog (fragment)
C;Species: Kenopus laevis (African clawed frog)
C;Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 13-Aug-1999
C;Acceshion: S29129
                                                                                                                                                                                       SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
                                                                                                                                                                                                                                                                                                                                         131 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNYEVKIDNSOVESGSLE 180
                                                                                                                                                                                                                                                                                                                                                                               SASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDIC 120
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                                                                                121 GPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLE
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                                          EPAVYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL
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83.9%; Pred. No. 6.2e-68;
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A; Cross-references: EMBL: AF125963; PIDN: AAD14746.1; GSPDB:GN00023; CESP: Y38A10A.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C;Species: Caenorhabditis elegans
C;Date: 06-Jan-1994 #sequence_revision 10-Nov-1995 #text_change 05-Nov-1999
C;Accession: S25851; T33996
                                                                                                                                                                                                                                                                                                                                                                                                                                                          SFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICGP 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FE-PFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICGP 122
                                                                                                                                                                                                                                                                                                                                                  17 VYFKEEFNDA-SWEKRWVQSKHKDDFGAFKLSAGKFFDVESRDQGIQTSQDAKFYSRAAK 75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4 VYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYALSAS 63
                                                                                                                                                                                                                                                                                                              4 VYFKEQFLDGDGWTSRWIESKHK-SDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYALSA 62
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A.Cross-references: EMBL:X59589; NID:g6693; PIDN:CAA42159.1; PID:g6694 R.Bauer, C.; Courtney, L.; LaPlant, Y. submitted to the EMBL bata Library; February 1999
A.Description: The sequence of C. elegans cosmid Y38A10A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA Seq. 2, 235-240, 1992
A/Title: A C. elegans gene encodes a protein homologous to
A/Reference number: $25851; MUID:92329978
A/Accession: $25851
A;Introns: 65/1; 222/3
C;Superfamily: calreticulin
C;Keywords: calculum binding; endoplasmic reticulum
F;1-17/Domain: signal sequence #status predicted <SIG>
F;403-406/Region: endoplasmic reticulum retention signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C;Superfamily: calreticulin
F;1-15/Domain: signal sequence #status predicted <SIG>
F;392-395/Region: endoplasmic reticulum retention signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Experimental source: strain Bristol N2; clone Y38A10A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               63.8%; Score 619.5; DB 2; 63.5%; Pred. No. 1.8e-48;
                                                                                                                                                                                              Score 699; DB 2;
Pred. No. 1.2e-55;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Status: preliminary; translated from GB/EMBL/DDBJ
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A; Accession: T33996
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A; Molecule type: DNA
A; Residues: 1-395 <SMI>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Map position: 5
A; Introns: 107/3; 315/3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
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Best Local Similarity
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A; Residues: 1-395 <BAU>
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C; Species: Drosophila melanogaster
C; Species: 11-Aug-1995 #sequence_revision 11-Aug-1995 #text_change 13-Aug-1999
C; Accession: A56637; A37158
A; Title: Nucleotide sequence of a Drosophila melanogaster gene encoding a calreticulin P A; Reference number: A56637; MUID:93208374
A; Reference number: A56637
A; Status: preliminary
A; Molecule type: DNA
A; Status: preliminary
A; Molecule type: DNA
A; Reference cextracted from NCBI Dackbone (NCBIN:128274, NCBIE:128275)
A; Cross-references: GB:X64461; NID:97685; PIDN:CAA45791.1; PID:97686
A; Note: sequence extracted from NCBI Dackbone (NCBIN:128274, NCBIE:128275)
A; Ciln. Invest. 86, 332-335, 1990
A; Title: A human Ro/SS-A autoantigen is the homologue of calreticulin and is highly home
A; Reference number: A37158; MUID:90307981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Accession: A37158
A;Status: preliminary; nucleic acid sequence not shown; not compared with conceptual tra
                                                                                                                                                                                                                                                                                                                                                                       and expression in the liver of the frog, Rana
                                                                                                                                                                                                               Cipecies: Rana rugosa (Korean frog)
Cibete: 29-Jan-1998 #sequence_revision 13-Feb-1998 #text_change 20-Jun-2000
Cibete: 29-Jan-1998 #sequence_revision 13-Feb-1998 #text_change 20-Jun-2000
Cibate: 29-Jan-1998 #sequence_revision 13-Feb-1998 #text_change 20-Jun-2000
Cibate: 28-Jan-1998 #sequence_revision 13-Feb-1998 #text_change 20-Jun-2000
R; Accession: 571343
A; FEBS Lett. 387, 27-32, 1996
A; Title: Calnexin: its molecular cloning and expression in the liver of the frog, A; Reference number: 571342; MUDD:96234004
A; Reference number: 571342; MUDD:96234004
A; Residues: 1-419 < XAM>A; Residues: 1-419 < XAM>A; Residues: 1-419 < XAM>A; Residues: 1-419 < XAM>A; Residues: alreticulin
C; Reywords: calcium binding; endoplasmic reticulum
C; Reywords: calcium binding; endoplasmic reticulum
F; 1-18/Domain: signal sequence #status predicted <ATO>
F; 19-419/Product: calreticulin #status predicted <ATO>
F; 205-213/Region: nuclear location signal
F; 415-418/Region: endoplasmic reticulum retention signal
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EPAVYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL
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    fruit fly (Drosophila melanogaster)

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  16; Indels
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A;Residues: 91-105,'A',107,109-124;182-183,'L',185-220 <MCC>
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      82.0%; Score 796; DB 2;
80.6%; Pred. No. 2.1e-64;
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A;Cross-references: FlyBase:FBgn0005585
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                                                                                                                                                                                                calreticulin precursor - Korean
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Best Local Similarity
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A;Status: preliminary
A;Molecule type: mRNA
A;Molecule type: mRNA
A;Residues: 1-421 CARE>
A;Cross-references: EMBL:X89813; NID:g927571; PIDN:CAA61939.1; PID:g927572
A;Cross-references: EMBL:X89813; NID:g927571; PIDN:CAA61939.1; PID:g927572
B;Napler, R.M.; Trueman, S.; Henderson, J.; Boyce, J.M.; Hawes, C.R.; Fricker, M.D.;
A;Napler, R.M.; Trueman, S.; Henderson, J.; Boyce, J.M.; Hawes, C.R.; Fricker, M.D.;
A;Napler, R.M.; Trueman, S.; Henderson, J.; Boyce, J.M.; Hawes, C.R.; Fricker, M.D.;
A;Nescription: Purification and sequencing of calreticulin from maize and evidence for A;Reference number: S49818
                                                                                                                                                                            C; Accession: T05705
R; Chen, F.; Hayes, P.M.; Mulroony, D.; Pan, A.
Plant Cell 6, 815-843, 1994
A; Title: Identification and characterization of cDNA clones encoding plant calreticul A; Reference number: 215422; MUID:94339696
A; Accession: T05705
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A; Description: Isolation of a cDNA encoding Calreticulin from in vitro zygotes of mai A; Accession: $58170
A; Accession: $58170
                                                              calreticulin - barley (fragment)
C;Species: Hordeum vulgare (barley)
C;Date: 23-Apr-1999 #sequence_revision 23-Apr-1999 #text_change 11-May-2000
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C;Date: 13-Jan-1996 #sequence_revision 01-Mar-1996 #text_change 13-Aug-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Molecule type: mRNA
A; Residues: 1-415 <CHE>
A; Cross-references: EMBL:L27349; NID:g439587; PIDN:AAA32949.1; PID:g439588
A; Experimental source: cv. Morex, ovary
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A;Residues: EMBL:246772; NID:9577611; PIDN:CAA86728.1; PID:9577612
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4 VYFKEQFLDGDGWTSRWIESKHKSD---FGKFVLSSGKFYGDEEKDKGLQTSQDARFYAL 60
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C;Keywords: calcium binding
F;1-25/Domain: signal sequence #status predicted <SIG>
F;418-421/Region: endoplasmic reticulum retention signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ouery Match 55.5%; Score 539; DB 2; Best Local Similarity 56.4%; Pred. No. 3.5e-41; Matches 101; Conservative 31; Mismatches 41
                                                                                                                                                                                                                                                                                                                                                                                                               A;Status: preliminary; translated from GB/EMBL/DDBJ
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C;Superfamily: calreticulin
C;Keywords: calcium binding
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C;Species: Hordeum vulgare (barley)
C;Species: Hordeum vulgare (barley)
C;Species: Hordeum vulgare (barley)
C;Species: Hordeum vulgare (barley)
C;Accession: T05703
R;Chen, F:; Hayes, P.M.; Mulroony, D.; Pan, A.
R;Chen, E.S.
R;Chen,
                                                                                          C; Species: Onchocarea volvulus
C; Species: Onchocarea volvulus
C; Dute: 21-May-1990 #sequence_revision 21-May-1990 #text_change 12-Apr-1995
C; Accewation: A32507; A28813
C; Accewation: A32507; A28813
J; Clin. Invest. 82, 262-269, 1988
J; Clin. Invest. 82, 262-269, 1988
J; Title: Isolation and characterization of expression cDNA clones encoding antigens of A; Newforence number: A92769; MuID:88273584
A; Accession: A32507
A; Accession: A32507
A; Accession: A32507
A; Residues: 1-336 cUNN>
C; Superfamily: calreticulin
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                                                              41K larval antigen - nematode (Onchocerca volvulus) (fragment)
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68.5%; Pred. No. 1.3e-41;
tive 22; Mismatches 22
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Matches 98; Conservative
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C)Superfamily: calreticulin
C)Keywords: calcium binding
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                                                  Query Match 55.2%; Score 536; DB 2; Length 421; Best Local Similarity 56.4%; Pred. No. 6.7e-41; Matches 101; Conservative 31; Mismatches 41; Indels
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Search completed: January 9, 2002, 15:02:02 Job time: 189 sec

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GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd.
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OM protein - protein search, using sw model

January 9, 2002, 15:12:15 ; Search time 25.18 Seconds (without alignments) 50.964 Million cell updates/sec Run on:

US-09-828-000-7 189 1 VIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 35

Title: Perfect score: Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

100059 seqs, 36664827 residues Searched:

100059 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

SwissProt_39:* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description	-	P18418 rattus norv	P27797 homo sapien	-	P52193 bos taurus	P42918 bos taurus	P29413 drosophila	-	Q06814 schistosoma	. P27798 caenorhabdi	Q9std3 chlamydomon	081919 beta vulgar	Q23858 dictyosteli			Q38858 arabidopsis				-	Q40401 nicotiana p		-	P25201 acinetobact	P27824 homo sapien	P35564 mus musculu		_	Q39994 helianthus	Q39817 glycine max		arabi	014967 homo sapien
SUMMARIES	ID	CRTC_MOUSE	CRTC_RAT	CRTC_HUMAN	CRTC_RABIT	CRT1_BOVIN	CRT2_BOVIN	CRTC_DROME	RAL1_ONCVO	CRTC_SCHMA	CRTC_CAEEL	CRTC_CHLRE	CRTC_BETVU	CRTC_DICDI	CRTC_PRUAR	CRTC_RICCO	CRT2_ARATH	CRTC_MAIZE	CRT3_ARATH	CRT1_ARATH	CRTC_ORYSA	CRTC_NICPL	CRTC_BERST	CRTC_EUGGR	MTA1_ACICA	CALX_HUMAN	CALX_MOUSE	CALX_RAT	CALX_CANFA	CALX_HELTU	CALX_SOYBN	CALG_MOUSE	CAX1_ARATH	CALG_HUMAN
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P34652 caenorhabdi	P13596 rattus norv
Q90578 gallus gall	P13590 gallus gall
P13594 mus musculu	P13595 mus musculu
P13592 homo sapien	P3227 swinepox vi
P13591 homo sapien	P36581 schizosacch
P31836 bos taurus	P39985 saccharomyc
CALX_CAEEL	NCA1_RAT
VDHA_CHICK	NCA1_CHICK
NCA2_MOUSE	NCA1_MOUSE
NCA2_HUMAN	VCO5_SPVKA
NCA1_HUMAN	CALX_SCHPO
NCA1_BOVIN	DPO5_YEAST
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619	858
463	1091
725	1115
761	236
848	560
853	1022
28.6	27.0
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MEDLINE 93202172; PubMed 8453984;
Nakamura M., Moriya M., Baba T., Michikawa Y., Yamanobe T., Aral K.,
Okinaga S., Kobayashi T.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rattus norvegicus (Rat).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Euthoria, Rodentia, Sciurognathi, Muridae, Murinae, Rattus
NCBI_TaxID 10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             'An endoplasmic reticulum protein, calreticulin, is transported into
                                                                                                                                                                                                                                                                                                                                                                                               P18418; P10452; 01-MAR-1989 (Rel. 10, Created) 01-MAR-1989 (Rel. 10, Created) 01-NOV-1990 (Rel. 15, Last sequence update) 01-NOV-1997 (Rel. 35, Last annotation update) CALRETICULIN PRECURSOR (CRESS) (CALREGULIN) (HACBP) (ERP60) (CALBP) (CALCIUM-BINDING PROTEIN 3) (CABP3).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Structural homology between the rat calreticulin gene product and the Onchocerca volvulus antigen Ral-1."; Nucleic Acids Res. 18:4933-4933(1990).
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STRAIN SPRAGUE-DAWLEY, TISSUE Brain cortex;
MEDLINE 90370496; PubMed 2395661;
MULTHY K.K., Banville D., Srikant C.B., Carrier F., Bell A.,
Holmes C., Patel Y.C.;
                                                                                                                                                                                                                                                                                   Length 416;
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                         PRINTS; PRO0626; CALRETICULIN.
PRODOM; PD001866; CALRETICULIN.
PROSITE; PS00014; ER_TRAGET; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 3.
Endoplusmic reticulum; Calcium-binding; Repeat; Signal.
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PREVENT SECRETION FROM ER.
24C03B00913408D8 CRC64;
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4 X APPROXIMATE REPEATS
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                                                                                                     CALRETICULIN
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InterPro; IPR001580; Calreticulin,
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               Pfam; PF00262; calreticulin; 1. PRINTS; PR00626; CALRETICULIN.
         IPR000886; ER_target.
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Matches 35, Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDIJUE:91054414; PubMed:2241926;
Treves S., de Mattei M., Lanfredi M., Villa A., Green N.M.,
Maclennan D.H., Meldolesi J., Pozzan T.;
"Calreticulin is a candidate for a calsequestrin-like function in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Scenariosen B., Fuellekrug J., Van Nguyen P., Dlekmann W., Robinson D.G., Mieskes G., "Retention and retrieval: both mechanisms cooperate to maintain carreticulin in the endoplasmic reticulum."; J. Cell Sci. 107:2705-2717(1994).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ca2(+)-storage compartments (calciosomes) of liver and brain.";
Biochem. J. 271:473-480(1990).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRAIN SPRAGUE-DAWLEY; TISSUE Testis;
MEDLINE-9236010; PubMed-1497655;
Makamura W. Michlawa Y., Baba T., Okinaga S., Arai K.;
"Calreticulin is present in the acrosome of spermatids of rat
                                                                                                                                                                                                                                                                                                                      Lone Y.C., Bailly A., Latruffe N.;
Submitted (DEC-1988) to the EMBL/GenBank/DDBJ databases.
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PROSITE; PS00014; ER_TARGET; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_EPPAT; 3.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal.
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SPRAGUE-DAWLEY; TISSUE Liver;
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EMBL; X53363; CAA37446.1; -.
EMBL; X13702; CAA31987.1; ALT_SEQ.
EMBL; X79327; CAA55890.1; -.
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                          MEDLINE 95181573; PubMed 7876339
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PRINTS; PR00626; CALRETICULIN.
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InterPro; IPR000886; ER_target.
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STRAIN LEC; TISSUE Liver;
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S11205; S11205.
S13045; S13045.
A49176; A49176.
S45036; S45036.
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MEDLINE-92002034; PubMed-1911778;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE-92129342; PubMed-1733953; MGCAulliffe D.P., Yang Y.S., Wilson J., Sontheimer R.D., Capra J.D.; MCAulliffe D.P., Yang Y.S., Wilson J., Sontheimer R.D., Capra J.D.; "The S'-flanking region of the human calreticulin gene shares homology with the human GRP78, GRP94, and protein disulfide isomerase
                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                         01-AUG-1992 (Rel. 23, Created)
01-AUG-1992 (Rel. 23, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
CALRETICULIN PRECURSOR (CREP5) (CALREGULIN) (HACBP) (ERP60) (52 KDA
RIBONUCLEOPROTEIN AUTOANTIGEN RO/SS-A).
                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE-92013129; PubMed-1919005; MEDLINE-92013129; PubMed-1919005; Rokeach L.A., Haselby J.A., Meilof J.F., Smeenk R.J., Unnasch T.R., Greene B.M., Hoch S.O.; "Characterization of the autoantigen calreticulin."; J. Immunol. 147:3031-3039(1991).
                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Molecular cloning, expression, and chromosome 19 localization of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Lamerdin J., McCready P., Stilwagen S., Ramirez M., Carrano A.; Submitted (MAR-1997) to the EMBL/GenBank/DDBJ databases.
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BY SIMILARITY.
PREVENT SECRETION FROM ER.
2E6713CED31A2970 CRC64;
    CALRETICULIN.
N-DOMAIN.
P-DOMAIN.
C-DOMAIN.
4 X APPROXIMATE REPEATS.
1-1.
                                                                                          3 X APPROXIMATE REPEATS
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100.0%; Pred. No. 3.4e-19;
:Ive 0; Mismatches 0;
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                                                                                                                                                          47995 MW;
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Matches 35; Conservative
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407
163
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Simpson R.J.;
proteins.";
Rojiani M.V., Finlay B.B., Gray V., Dedhar S.;
"In vitro interaction of a polypeptide homologous to human Ro/SS-A
antigen (calreticulin) with a highly conserved amino acid sequence in
the cytoplasmic domain of integrin alpha subunits.";
Biochemistry 30:9859-9866(1991).
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MEDLINE-90380058; PubMed=2400400;
Krause K.H., Simmerman H.K.B., Jones L.R., Campbell K.P.;
Krausec K.H., Simmerity of calreticulin with a Ca2(+)-binding protein that co-purifies with an Ins(1,4,5)P3-sensitive Ca2+ store in HL-60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hochstrasser D.F., Frutiger S., Paquet N., Bairoch A., Ravier F., Pasquali C., Sanchez J.-C., Tissot J.-D., Bjellqvist B., Vargas R., Appel R.D., Hughes G.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Microsequences of 145 proteins recorded in the two-dimensional gel protein database of normal human epidermal keratinocytes."; Electrophoresis 13:960-969(1992).
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Vandekerckhove J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Human liver protein map: a reference database established by microsequencing and gel comparison."; Electrophoresis 13:992-1001(1992).
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PRODOM; PRO01866; CALTETICULIN; 1.
PROSITE; PS00014; ER TARGET; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
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InterPro; IPR000886; ER_target.
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MEDLINE=93162043; PubMed=1286667;
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EMBL; M32294; AAA36582.1; -.
EMBL; AD000092; AAB51176.1; -.
PIR; A37047; A37047.
PIR; S11475; S11475.
PIR; A42330; A42330.
PIR; A46452; A46452.
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Aarhus/Ghent-2DPAGE; 9401; IEF
HSC-2DPAGE; P27797; HUMAN.
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1 VIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 35
  R.E.,
                                         reticulum."
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MEDLINE-90094320; PubMed 2600080;
Filegol L., Burns K., Maclenan D.H., Reithmeler R.A.F., Michalak M.;
Fulegol L., Burns K., Maclenan D.H., Reithmeler R.A.F., Michalak M.;
Fulecular cloning of the high affinity calcium-binding protein
(calreticulin) of skeletal muscle sarcoplasmic reticulum.";
J. Blol. Chem. 264:21522-21528(1989).
                                                                                                                                                                                                                                                           Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                             Oryciolagus cuniculus (Rabbit).
Eukaryota, Matazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Lagomorpha, Leporidae, Oryctolagus.
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                                                                                                                                                                                                                                      Length 417;
                                                                                                                                                                                                                                                                                                                                                                        01-APR-1990 (Rel. 14, Last sequence update)
01-OCT-1996 (Rel. 34, Last annotation update)
CALRETICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP) (ERP60).
                                                                                                                                                                  ASP/GLU/LYS-RICH.
BY SIMILARITY.
PREVENT SECRETION FROM ER.
MISSING (IN REF. 3).
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CALRETICULIN_2; 1.
CALRETICULIN_REPEAT; 3.
ilum; Calcium-binding; Repeat; Signal.
                                                N-DOMAIN,
P-DOMAIN,
C-DOMAIN,
4 X APPROXIMATE REPEATS
                                                                                                                              3 X APPROXIMATE REPEATS
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Pred. No. 3.4e-19;
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                                        CALRETICULIN
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MEDLINE 91282795; PubMed 2059224;
Fliegel L., Michalak M.;
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MEDLINE 91201375; Pubmed 2016321;
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100.0%; Pr
tive 0;
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Best Local Similarity 100.
Matches 35; Conservative
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                      Endoplasmic reticulum;
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            PS00805;
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P15253;
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            PROSITE;
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Milner R.E., Baksh S., Shemanko C., Carpenter M.R., Smillie L., Vance J.E., Opas M., Michalak M.; "Calreticulin, and not calsequestrin, is the major calcium binding protein of smooth muscle sarcoplasmic reticulum and liver endoplasmic
                                                                                                                                                                                                                                Guan S., Falick A.M., Williams D.E., Cashman J.R.; "Evidence for complex formation between rabbit lung flavin-containing monooxygenase and calreticulin.";
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                                                                                                                                                                                                                                                                                              Biochemistry 30:9892-9900(1991).
-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW APPINITY CALCIUM-BINDING SITES.
-!- SUBUNIT: MONDAR (BY SIMILARITY).
-!- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
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mic reticulum; Calcium-binding; Repeat; Signal.
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B6082B689DC763A6 CRC64;
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4 X APPROXIMATE REPEATS.
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Pred. No. 3.4e-19;
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PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
                                                                                                                  Biol. Chem. 266:7155-7165(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pfam; PF00262; calreticulin; 1. PRINTS; PR00626; CALRETICULIN. ProDom; PD001866; Calreticulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FIK; S1304/; S1304/.
InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
                                                                                                                                                                                   TISSUE-Lung;
MEDLINE-92002038; PubMed 1911780;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7
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Best Local Similarity 100.

Matches 35; Conservative
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255
269
269
283
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SIGNAL 1 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PIR, A34154, A34154.
PIR, C33208, C33208.
PIR, D33208, B33208.
PIR, E33208, E33208.
PIR, S13208, E33208.
PIR, S13046, S13046.
PIR, S13047, S13047.
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                                                                                                                                                             PARTIAL SEQUENCE.
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BOVIN

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15-JUL-1998 (Rel. 36, Last annotation update)
CALRETICULIN, BRAIN ISOFORM 2 PRECURSOR (CRP55) (CALREGULIN) (HACBP).
                                                                                                                                                                                                                                                                                                                 Biochim. Biophys. Acta 1202:70-76(1993).
-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM-BINDING SITES.
-!- SUBUNT: MONOMER (BY SIMILARITY).
-!- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                         Mammalia; Butheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                               Bos taurus (Bovine).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
                                                                                                                                                                                                                                                  Liu N., Fine R.E., Johnson R.J.; "Comparison of cDNAs from bovine brain coding for two isoforms of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N-LINKED (GLCNAC. .) (POTENTIAL).
PREVENT SECRETION FROM ER.
0257E959F71528BC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 184; DB 1; Length 421;
Pred. No. 1.7e-18;
1; Mismatches 0; Indels
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CALRETICULIN, BRAIN ISOFORM
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4 X APPROXIMATE REPEATS.
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BY SIMILARITY.
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PROSITE: PS00014; ER_TRREF; 1.
PROSITE: PS00003; CALRETICULIN_1; 1.
PROSITE: PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_2; 3.
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P-DOMAIN.
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InterPro; IPR000886; ER_target.
                                                                                                                                                                                                                             MEDLINE=93385184; PubMed=8373827;
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PRINTS; PR00626; CALRETICULIN.
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Best Local Similarity 97.1%;
Matches 34; Conservative
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                                                                                                         Bovidae; Bovinae; Bos.
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                                                                                                                                                                                                        TISSUE=Brain;
                                                                                                                                                                                                                                                                                                 calreticulin.
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"Covalent structure of bovine brain calreticulin.";
"La Blochen. J. 298 435-442(1994).
"IL Blochen. J. 298 435-442(1994).
"IL SUBUNT: WARRINITY CALCIUM-BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM-BINDS SITES.
"I- SUBCLIULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
"I- SUBCLIULARITY: BELONGS TO THE CALRETICULIN FAMILY.
"InterPro; IPR001580; Calreticulin.
"R InterPro; IPR001686; Extarget.
"R FRINTS; PR00626; Calreticulin; I.
"PRODOM: PR0014; Extarget."
"R PRODOM: PR001866; Calreticulin; I.
"PROSITE: PS000804; CALRETICULIN.]; I.
"PROSITE: PS000804; CALRETICULIN.]; I.
"PROSITE: PS000804; CALRETICULIN.]; I.
"PROSITE: PS000804; CALRETICULIN.]; I.
"PROSITE: PS000805; CALRETI
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PREVENT SECRETION FROM ER (POTENTIAL).
7D4B68DFC689EEF1 CRC64;
                                                                                                                                                                                                                                                                     Bos taurus (Bovine).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
Bovidae; Bovinae; Bos.
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0
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                                                                                                                                                                              01-OCT-1996 (Rel. 34, Created)
1-OCT-1996 (Rel. 34, Last sequence update)
01-OCT-1996 (Rel. 34, Last annotation update)
CALRETICULIN, BRAIN ISOFORM 1 (CRP55) (CALREGULIN) (HACBP).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 400;
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Pred. No. 1.6e-18;
1; Mismatches 0;
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  146 VIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              129 VIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPNN 163
                                                                                                                                      400 AA
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(Rel. 32, Last sequence update)
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                                                                                                                                        PRT;
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llarity 97.1%;
Conservative
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DOMAIN 181 291
DOMAIN 292 400
DOMAIN 174 238
REPEAT 174 185
REPEAT 193 204
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nes 34; Conserv
                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=9913;
                                                                                                                                                                                                                                                                                                                                                                                                                                     TISSUE-Brain;
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P42918;
01-NOV-1995 (
01-NOV-1995 (
                                                                                                                                   CRT1_BOVIN
P52193;
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Best Loc Matches

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RA Admins M.D., Celoliker S.E., Holt R.A., Evans C.A., Gocayne J.D.,
RA Admins M.D., Celoliker S.E., Holt R.A., Evans C.A., Gocayne J.D.,
RA Admins M.D., Celoliker S.E., Holt R.A., Evans C.A., Gocayne J.D.,
RA Georger R.A., Levis S.E., Richards S., Ashburner M., Henderson S.N.,
RA Georger R.A., Levis S.E., Richards S., Chang Q., Chen L.X.,
R Handon R.C., Rogers Y.-H.C., Blazef R.G., Change M., Periffer B.D.,
RA Bullow R.M., Bauu A., Baxendale J., Bayerkatacolu L., Bassley E.M.,
RA Bullow R.M., Bauu A., Baxendale J., Bayerkatacolu L., Bassley E.M.,
RA Bullow R.M., Bauu A., Baxendale J., Bayerkatacolu L., Bassley E.M.,
RA Burtis K.C., Busam D.A., Bullor H., Caddeu E., Center A., Center A.,
Burtis K.C., Busam D.A., Dahlke C., Davengort L.B., Davids P.,
RA Cherry J.M., Cawley S., Dahlke C., Davengort L.B., Davids P.,
RA Cherry J.M., Cawley S., Dahlke C., Davengort L.B., Davids P.,
RA Dodson K., Doup L.E., Downson M., Lagar R.A.,
R. Goder C., Gabriellan A.E., Garrell J.H., Gu Z., Gun P., Harris M.L.,
R. Goorf F., Gorrell J.H., Gu Z., Gun P., Harris M.L.,
R. Harris M.L., Harvey D., Howland T.J., Herandez J.R., Rollow C.,
A Julul M., Kalush F., Karpen G.H., Re Z., Kennison J.R., Relson M.,
R. Harris M.L., Harvey D., Holman T.J., Her M.-H., Ibegwam C.,
A Liu X., Matter B., McInton R.A., Li J., Li Z., Ling Y., Lin X.,
R. Harko P., Led Y., Levitsky A.A., Li J., Li Z., Ling Y., Lin X.,
R. Harkolov G., Milshina G.S., Pan S., Pollard J., Woshrefi A.,
R. Hunt S.M., Moy M., Murphy B., Mcredo M.P., McPherson D.,
R. Harrison D.R., Matamen G.S., Pan S., Pollard J., Woshrefi A.,
R. Hunt K.K., Realington K.A., Nolly W., Venter E., Wang A.,
R. Hunt R. K., Wassarman D.A., Weilsberder M., Strong R., Yen R.,
R. Hunt R. K., Realington K., Stunders R., Venter E., Wang S., Yao Q. A.,
R. Hunt R. M., Wassarman D.A., Weilsberder M., Scheeler F., Shen H.,
R. Tecker S., Wooley E. W., Rollon G.M., Weissenber J.,
R. The Gromen Sequence of Drogophila melanogaster ".;
R. The Grome 
                                                                                                                                                                               Drosophila melanogaster (Fruit fly).
Eukaryota; Metazoa; Arthropoda; Trachata; Hexapoda; Insecta;
Pierygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroideu; Drosophilidea; Drosophila.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "A human RO/SS-A autoantigen is the homologue of calreticulin and is highly homologous with onchocercal RAL-1 antigen and an aplysia 'mremory molecule'."

"A clin. Invest. 86:332-335(1990).

-I- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW SELLULAR ELCARIUM FUNDING SITES.

-I- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.

-I- SUBCELLULAR: BELONGS TO THE CALRETICULIN FAMILY.
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McCaullffo D.P., Zappi E., Lieu T.S., Michalak M., Sonthelmer R.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ಥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Nucleotide sequence of a Drosophila melancerater gene encoding calreticulin homologue.";
                      01-APR-1993 (Rel. 25, Created)
01-OCT-1993 (Rel. 27, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
CALNETICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP).
                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE-93208374; Pubmed 1296819;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE OF 91-124 AND 182-220
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA Seq. 3:247-250(1992).
                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SPOUENCE FROM N.A.
                                                                                                                                                                                                                                                                              Ephydroidea; Dros
P29413: 09VHA3:
                                                                                                                                                     CRC OR CG9429.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Capra J.D.;
                                                                                                                                                                                                                                                                                                                                                                                                                                 Smith M.J.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way
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MEDLINE=94341871; PubMed=7520419;
MEDLINE=94341871; PubMed=7520419;
MEDLINE=94341871; PubMed=7520419;
"Epitopes of the Onchocerca volvulus RAL1 antigen, a member of the calreticulin family of proteins, recognized by sera from patients with onchocerclasis.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Nematoda; Chromadorea; Spirurida; Filarioidea; Onchocercidae; Onchocerca.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         83.6%; Score 158; DB 1; Length 406; 82.9%; Pred. No. 7.6e-15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro; IPR000886; Extarget.
InterPro; IPR000886; Extarget.
Pfam; PP000262; calreticulin; 1.
PRINTS; PR00056; CALRETICULIN
ProDom; PD001866; CALRETICULIN; 1.
PROSITE; PS00004; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_ERPEAT; 3.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal.
SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -> A (IN REF. 3).
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01-NOV-1995 (Rel. 32, Last sequence update)
01-OCT-1996 (Rel. 34, Last annotation update)
RAL-1 PROTEIN PRECURSOR (41 KDA LARVAL ANTIGEN).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        146 VIFSYKGKNHLISKDIRCKDDVYTHFYTLIVRPDN 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     388 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CALRETICULIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Infect. Immun. 62:3696-3704(1994).
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                                                                                                                                                                                                                                                                                                                                                                                  EMBL; AE003683; AAF54416.1; -. PIR; A37158; A37158.
FlyBase; FBgn0005585; Crc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         46808 MW;
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                                                                                                                                                                                                                                                                                                                                            EMBL; X64461; CAA45791.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           29; Conservative
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P11012;
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SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
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REPEAT
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 removed. Usage by and for commercial ent (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                           CRTC_SCHMA STANDARD; PRT; 393 AA.
006814; 026562; 02624 (Rel. 29, Created)
01-NOV-1994 (Rel. 33, Last sequence update)
01-NOV-1997 (Rel. 35, Last annotation update)
01-NOV-1997 (Rel. 36, Last annotation update)
CALERFICUIGN PRECURSOR (SM4 PROTEIN).
SCHISTOSOMA mansoni (Blood fluke).
SCHISTOSOMA mansoni (Blood fluke).
Eukaryota: Metazoa; Platyhelminthes; Turbellarian Platyhelminths;
Enkaryota: Metazoa; Platyhelminthes; Revertospermata; Mediofusata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Biochem. Parasitol. 62:313-315(1993).
FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM BINDING SITES.
SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
STRAIN-PUERTO RICAN;
MEDLINE-94187805; PubMed-8139623;
Khalife J., Pierce R.J., Godin C., Capron A.;
"Cloning and sequencing of the gene encoding Schistosoma mansoni
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rhabditophora; Bulecithophora; Revertospermata; Mediofusata;
Neodermata; Trematoda; Digenea; Strigeidida; Schistosomatoidea;
Schistosomatidae; Schistosoma.
                                                                                                                                                                                                                                                                                                                                      ó
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Capron A.; "Cloning of the gene encoding a Schistosoma mansoni antigen
                                                                                                                                                                                                                                                                                                                Length 388;
                                                                                                                                                                                                                                                                                                                                       6; Indels
                                                                                                                                                                                                                                                                         SIMILARITY.
9537F298A2D31CD6 CRC64;
                                                                                                                                                       RAL-1 PROTEIN.
4 X APPROXIMATE REPEATS
                                                                                                                                                                                                                      X APPROXIMATE REPEATS
                                                                                                                                                                                                                                                             ARG/LYS-RICH (BASIC).
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                Score 139; DB 1;
Pred. No. 3.4e-12;
                                                                                                                                                                                                                                                                                                                                                                     PIR; A32507; A32507.
InterPro; IPR001580; Calreticulin.
Pfam, PF00262; calreticulin; 1.
PRINTS; PR00626; CALRETICULIN.
PRODOM; PD0010866; Calreticulin; 1.
PROSITE; PS00803; CALRETICULIN_2; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
                                                                                                                                                                                                                                                                                                                                                        1 VIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 35
                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              homologous to human Ro/SS-A autoantigen.";
Mol. Biochem. Parasitol. 57:193-202(1993).
                                                                                                                                 Calcium-binding; Repeat; Antigen; Signal. SIGNAL 1 17 POTENTIAL.
modified and this statement is not removentities requires a license agreement (Sor send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
STRAIN-PUERTO RICAN;
MEDLINE-93165070; PubMed-8433712;
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74.38;
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                                       EMBL; M20565; AAA59056.1;
                                                                                                                                                                                                                                                                                                                                      Conservative
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253
200
219
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253
253
2295
267
281
388
                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                  388 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID-6183;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 calreticulin.
                                                                                                                                                                                                                                                                                                                                    26;
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DISULFID
                                                                                                                                                                                                                                                                                  SEQUENCE
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REPEAT
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CRTC_SCHMA
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                                                                                                                                                                                                                                                                                                                                                       PROSITE; PS00014; ER_TARGET; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPERT; 1.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal; Glycoprotein.
SIGNAL 1 16
POTENTIAL.
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NCBI_TaxID=6239;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N-LINKED (GLCNAC. . .) (POTENTIAL).
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"A C. elegans gene encodes a protein homologous to mammalian
calreticulin.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 393;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CALRETICULIN.
4 X 12 AA APPROXIMATE REPEATS.
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3 x 11 AA APPROXIMATE REPEATS.
2-1.
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PREVENT SECRETION FROM ER.
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MISSING (IN REF. 2).
Y -> D (IN REF. 2).
45F59857C21940D2 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 138; DB 1;
Pred. No. 4.8e-12;
2; Mismatches 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (Rel. 23, Last sequence update)
(Rel. 28, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 144 VIENYKGKNHLIKKEIPCKDDEKTHLYTLIVNPNN 178
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
                                                                                                                                                                                                                                           Interpro; IPR001580; Calreticulin.
Interpro; IPR000886; ER_target.
Pfam; PF00262; calreticulin; 1.
                                                                                                                                                                                                                                                                                                                                       ProDom; PD001866; Calreticulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRAIN=BRISTOL N2;
MEDLINE=92329978; PubMed=1627827;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-AUG-1992 (Rel. 23, Created)
                                                                                                                                                                                                                                                                                                              PRINTS; PR00626; CALRETICULIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      X.
                                                                                                                                                                           EMBL; M93097; AAA29854.1; -. EMBL; L24159; AAA19024.1; -.
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ilarity 77.1%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   45397
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STANDARD;
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295
267
281
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                                                                                                                                                                                                                         HSSP; P00268; 4RXN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   393 AA;
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Best Local Similarity
Matches 27; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                [1]
SEQUENCE FROM N.A.
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01-FEB-1994
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P27798;
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CARBOHYD
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Viereck R.;
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081919;
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      SO THE FET HER DESCRIPTION OF THE PET HER DESCRI
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation-the European Bloinformatics institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Chlumydomonas reinhardtii.
Eukaryotu; Viridiplantae; Chlorophyta; Chlorophyceae; Volvocales;
Chlumydomonadaceae; Chlamydomonas.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
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"Cloning and Characterization of a cDNA encoding Chlamydomonas
reinhardtii calreticulin.";
Submitted (OCT-1997) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                              PIR; 525851; S25851.

InterPro; IPR001880; Calreticulin.

InterPro; IPR001880; ER_target.

Plan; PP00162; Calreticulin; 1.

R PRINTS; PR00626; Calreticulin; 1.

R PROSITE; PS00014; ER_TRAGET; 1.

R PROSITE; PS00804; CALRETICULIN, 1.

R PROSITE; PS00804; CALRETICULIN_1; 1.

R PROSITE; PS00804; CALRETICULIN_2; 1.

R PROSITE; PS00805; CALRETICULIN_REPEAT; 3.

KW Endoplasmic reticulum; Calcium-binding; Repeat; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 395;
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BY SIMILARITY.
PREVENT SECRETION FROM ER
35CA7D2ECID56B03 CRC64;
                  LOW AFFINITY CALCIUM-BINDING SITES.
SUBCELLUIAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3 X APPROXIMATE REPEATS. 2-1.
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8.9e-11;
ches 8;
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(Rel. 40, Last sequence update)
(Rel. 40, Last annotation update)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 129;
Pred. No. 8
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68.6%;
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Bust Local Similarity 68.6
Matches 24; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STANDARD;
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301
395
395
197
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395 AA;
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Q9STD3;
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-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND
LOW AFFINITY CALCIUM-BINDING SITES (BY SIMILARITY).
-!- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN (BY SIMILARITY).
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
-:- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM-BINDING SITES (BY SIMILARITY).
-:- SUBCELLULAR LOCATION: BINDOPLASMIC RETICULUM LUMBN (BY SIMILARITY).
-:- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CALRETICULIN.
PREVENT SECRETION FROM ER (POTENTIAL).
DD3BA3AFFBF61C9B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryotá, Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Caryophyllidae; Caryophyllales; Chenopodiaceae; Beta.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     66.7%; Score 126; DB 1; Length 420;
60.0%; Pred. No. 2.5e-10;
ive 7; Mismatches 7; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Calcium-binding; Repeat; Signal.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20-AUG-2001 (Rel. 40, Last sequence update) 20-AUG-2001 (Rel. 40, Last annotation update) CALRETICULIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       416 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 VIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROSITE; PS00804; CALRETICULIN_2; 1. PROSITE; PS00805; CALRETICULIN_REPEAT; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRINTS; PRO0626; CALRETICULIN.
PRODOM; PRO01866; CALTESTICULIN; 1.
PROSITE; PSO0014; ER_TARGET; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL, AJ000765, CAB54526.1; -.
InterPro; IPR001580, Calreticulin.
InterPro; IPR000866, ER_target.
Pfam: PF00262; calreticulin, 1.
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Mendel; 32549; Betvu;1166;32549
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Beta vulgaris (Sugar beet).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21; Conservative
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SIGNAL 1 18
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity
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us-09-828-000-7.rsp

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CRTC_PRUAR
Q9XF98;
                                              REPEAT
REPEAT
DISULFID
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                                                                                                                   SEQUENCE
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                DOMAIN
 REPEAT
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or send an email to license@isb-sib.ch).
           Gaps
                                                                                                                                                                                      CALRETICULIN.

N-LINKED (GLCNAC. .) (POTENTIAL).

N-LINKED (GLCNAC. .) (POTENTIAL).

N-ENEVENT SECRETION FROM ER (POTENTIAL).

565FEG3489F77CA7 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mueller-Taubenberger A., Gerisch G.;
Submitted (DEC-1997) to the EMBL/GenBank/DDBJ databases.
-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND
LOW APFINITY CALCIUM-BINDING SITES (BY SIMILARITY).
-!- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                      ..
                                                                                                                                                                                                                                                                                                                Length 416;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CALRETICULIN.
4 X 12 AA APPROXIMATE REPEATS.
11-1.
1-2.
                                                                                                                                                                                                                                                                                                                                                    9; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Calcium-binding; Repeat; Signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Dictyostelium discoideum (Slime mold).
Eukaryota, Mycetozoa, Dictyosteliida, Dictyostelium.
NCBL_TaxID=44689;
                                                                                                                                                                                                                                                                                                              Score 110; DB 1;
Pred. No. 4.4e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      , Last sequence update)
, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro: IPR001880; Calreticulin.
InterPro: IPR001880; ER_target.
Pfam; PF00262; calreticulin; 1.
PRNOM: PR00626; CALRETICULIN.
PRODOM: PD001886; CALRETICULIN.
PROSITE; PS00804; CALRETICULIN.2; 1.
PROSITE; PS00814; ER_TARGET; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  424 AA
                                                                                                                                                                                                                                                                                                                                                    5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                          153 IFNYNDTNHLIKKDVPCETDQLTHVYTFILRPD 185
                                                                                                                                                                                                                                                                                                                                                                                       2 IFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPD 34
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InterPro; IPR001580; Calreticulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15-DEC-1998 (Rel. 37, Created)
                                                                                                                                                                                                                                                              48136 MW;
                                                                                                                                                                                                                                                                                                             58.2%;
57.6%;
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                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 57.6
Matches 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CALRETICULIN PRECURSOR.
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                                                                                                                                                                                      26
57
157
1413
416 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
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191
191
211
227
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Q23858;
                                                                                                                                                                                                                                                            SEQUENCE
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REPEAT
REPEAT
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CRTC_DICDI
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                                                                                                                                                                                                                                                                                                       ;;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                apricot (Prunus armeniaca cv. Bergerón).";
Submitted (MAR-1999) to the EMBL/GenBank/DDBJ databases.
-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND
LOW AFFINITY CALCIUM-BINDING SITES (BY SIMILARITY).
-!- SUBCELIULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN (BY SIMILARITY).
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Prunus armeniaca (Apricot).
Bukaryota: Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta: Magnaliophyta; eudicotyledons; core eudicots; Rosidae;
eurosids I; Rosales; Rosaceae; Prunus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ProDom; PD001866; Calreticulin; 1.
PROSITE; PS00014; ER_TARGET; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 2.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal; Glycoprotein.
                                                                                                                                                                                                                                                                                                       Gaps
                                                                 2-2.
2-3.
BY SIMILARITY.
PREVENT SECRETION FROM ER (POTENTIAL).
; BAF273694FB6FC37 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N-LINKED (GLCNAC. ..) (POTENTIAL).
N-LINKED (GLCNAC. ..) (POTENTIAL).
PREVENT SECRETION FROM ER (POTENTIAL).
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STRAIN=CV. BERGERON; TISSUE=Mesocarp, and Endocarp;
Mbeguie-A-Mbeguie D., Fils-Lycaon B.R.;
"Molecular cloning and nucleotide sequence of a calreticulin from
                                                                                                                                                                                                                                                                                                       ä
                                                                                                                                                                                                                                              Score 108.5; DB 1; Length 424; Pred. No. 7.3e-08; 6; Mismatches 8; Indels 1;
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  1-4.
3 X 11 AA APPROXIMATE REPEATS.
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Pred. No. 1.2e-07;
                                                                                                                                                                                                                                                                                                                                                                                      20-AUG-2001 (Rel. 40, Last sequence update) 20-AUG-2001 (Rel. 40, Last annotation update) CALRETICULIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                           1 VIFNYKGKNVLINKDI-RCKDDEFTHLYTLIVRPDN 35
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InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
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Best Local Similarity 58.33
Matches 21; Conservative
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257
298
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137
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                                                                                                                                                                        424 AA;
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246
260
260
274
274
288
105
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Eukaryota: Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae;
eurosida I; Malpighiales; Euphorbiaceae; Ricinus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Print, Print, Annouse, Entriculi, 1.
Print, PR00263; Calreticulin, 1.
Probom; PR001866; Calreticulin; 1.
PROSITE; P80014; ER_TARGET; 1.
PROSITE; P800803; CALRETICULIN_1; 1.
PROSITE; P800804; CALRETICULIN_1; 1.
PROSITE; P800805; CALRETICULIN_2; 1.
PROSITE; P800805; CALRETICULIN_2; 1.
Endoplasmic reticulum; Calcium_binding; Repeat; Signal; Glycoprotein.
   Gaps
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                                                                                                                                                                                                                                                                                                                                                                                      Coughlan S.J., Hastings C., Winfrey R. Jr.; "Cloning and characterization of the calreticulin gene from Ricinus communis L.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N-LINKED (GLCNAC. .) (POTENTIAL).
N-LINKED (GLCNAC. .) (POTENTIAL).
PREVENT SECRETION FROM ER (POTENTIAL).
DDSF452E76CC7FRC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                       Plant Mol. Biol. 34:897-911(1997).
-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LAW APFINITY CALCIUM-BINDING SITES.
-!- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
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51.5%; Pred. No. 2.2e-07;
tive 7; Mismatches 9; Indels
   Indels
 10;
                                                                                                                                                                                  20-AUG-2001 (Rel. 40, Created)
20-AUG-2001 (Rel. 40, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
CALKFTICULIN PRECURSOR.
                                                                                                                                                        415 AA
5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 IFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPD 34
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CALRETICULIN.
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                                                                                                                                                      PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mendel, 10452; Ricco; 1166; 10452.
InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A. MEDLINE 97435975; Pubmed 9290642;
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Best Local Similarity 51.55
Matches 17; Conservative
Matches 18; Conservative
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                                                                                                                                                  STANDARD;
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412 4
415 AA;
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P93508;
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                                                                                                                   RESULT 15
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Search completed: January 9, 2002, 15:12:16 Job time: 658 sec Q9ylvl leishmania Q9bmp7 plasmodium Q9blh3 halocynthia Q98985 rana rugosa

Q9Y1V1 Q9BMP7 Q9BLH3 Q98985

Q9VYP4

Q9vyp4 drosophila Q9val7 drosophila Q9i759 drosophila Q9vxf6 drosophila 002393 drosophila

09xyf8 trypanosoma 076214 schistosoma 09t45 schistosoma 026045 proliferati 094592 leishmania 09udg2 homo sapien 053293 acinetobact

09d9q6 mus musculu 040567 nicotiana t

Q9ng26 tritrichomo Q9u9n9 trypanosoma

brassica na mus musculu

094373 Q9st29

Q9D373 Q9ST29 Q9D9Q6 Q40567

solanum mel

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SEQUENCE FROM N.A.
MEDLINE=20063780; PubMed=10594174;
Kuraku S., Hoshiyama D., Katch K., Suga H., Miyata T.;
"Monophyly of lampreys and hagfishes supported by nuclear DNA-coded
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Hyperoartia;
Petromyzontiformes; Petromyzontidae; Lampetra.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              36997 MW; C88102EA1CAC1506 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    91.5%; Score 173; DB 13;
94.1%; Pred. No. 3.4e-16;
tive 1; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             genes.";
J. Mol. Evol. 49:729-735(1999).

BMBL; AB02338; BAA88481.1; -.

InterPro: IPR001580; Calreticulin.

Pfam; PF00262; Calreticulin.

PROSITE; PS00804; CALRETICULIN.

PROSITE PS00804; CALRETICU
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Best Local Similarity 94.1
Matches 32; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CALRETICULIN (FRAGMENT).
Lampetra reissneri.
NCBI_TaxID=7753
                                                                                                                                            Q9PTX7;
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RESULT
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Q41799 zea mays (m
Q43712 zea mays (m
Q40040 hordeum vul
Q40041 hordeum vul
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                                                                                    Search time 78.15 Seconds (without alignments) 65.509 Million cell updates/sec
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Q26268 aplysia cal
Q16893 amblyomma a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Description
                                                                                                                                                                                                                                                                   473505
           version 4.5
- 2000 Compugen Ltd
                                                                                                                                                                     1 VIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 35
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                                                                                                                                                                                                                                        473505 seqs, 146272329 residues
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                                                                                         9, 2002, 15:03:29
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Maximum Match 100%
Listing first 45 summaries
                                                              - protein search, using sw model
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Q917110
Q917110
Q9PUC1
Q26514
Q45034
Q76961
Q98984
Q18478
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Q41799
Q43712
Q40040
Q40041
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sp_unclassified:*
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sp_human:*
sp_invertebrate:*
           GenCore
Copyright (c) 1993
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sp_phage:*
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seq length: 2000000000
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sp_bacteria:*
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113
110
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189
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sp_virus:*
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                                                                                         January
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Match
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                                                              OM protein
                                                                                                                                                                                                                                                                                             Minimum DB
Maximum DB
                                                                                                                                                                        Sequence:
                                                                                                                                                                                                                                         Searched:
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                                                                                         Run on:
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Last sequence update) Last annotation update)

Created)

318 AA

ALIGNMENTS

Q9VXF6 002393

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Gaps

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Length 318; Indels

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Query Match
Best Local Similarity 88.69
Matches 31, Conservative
                                                                    Query Match
Best Local Similarity 85.77
Matches 30; Conservative
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TISSUE SALIVARY GLANDS;
Jaworski D.C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Amblyomma americanum.
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Q16893
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Eukaryota; Metazoa; Mollusca; Gastropoda; Opisthobranchia; Anaspidea;
Aplysiidae; Aplysia
NCHI_TaxID 6500;
                                                                                                                                                                                                                                                               Strongylocentrotus purpuratus (Purple sea urchin).
Eukaryota; Metazoa; Echinodermata; Eleutherozoa; Echinozoa;
Echinoidea; Euechinoidea; Echinacea; Echinoida; Strongylocentrotidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE 93098937; PubMed 1463604;
Kennedy T.E., Kuhl D., Barzilai A., Sweatt J.D., Kandel E.R.;
"Long-term sensitization training in Aplysia leads to an increase in
calreticulin, a major presynaptic calcium-binding protein.";
Neuron 9:1013-1024(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
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PRODCH, PD001866, Calreticulin, 1.
PROSITE; PS00803, CALRETICULIN_1; 1.
PROSITE; PS00804, CALRETICULIN_2; 1.
PROSITE; PS00804, CALRETICULIN_REPEAT; 3.
PROSITE; PS000014, ER_TARGET; UNKNOWN_1.
SEQUENCE 405 AA; 46738 MM; 14CAAZ01840DID69 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421 CALRETICULIN.
48822 MW; 172C664F59F41F93 CRC64;
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01-NOV-1996 (TrEMBLrol. 01, Last sequence update)
01-JUN-2001 (TrEMBLrol. 17, Last annotation update)
                                                                                                                                    Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          89.4%; Score 169; DB 5; L
88.6%; Pred. No. 1.7e-15;
tive 2; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 145 VIFNYKGKNLLIKKDIRCKDDEFTHLYTLIVKSDN 179
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InterPro; IPR001580; Caltericulin.
Pium; PF00262; calreticulin; 1.
                                                                                               01-MAY-2000 (TrEMBLrel. 13, 01-MAY-2000 (TrEMBLrel. 13, 01-UNA-2001 (TrEMBLrel. 17, CALRETICULIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Bout Local Similarity 88.69
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                                  PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                  Strongylocentrotus.
NCHL_TaxID 7668;
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TISSUE-SALIVARY GLANDS;
JAWYESKI D.C., Simmen F.A., Lamoreaux W.J., Coons L.B., Muller M.T.,
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01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
CALRETICULIN (FRAGMENT).
Xenopus laevis (African clawed frog).
Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
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Parasitiformes; Ixodida; Ixodidae; Amblyomma.
NCBI_TaxID-6943;
Score 168; DB 5; Length 405;
Pred. No. 2.2e-15;
3; Mismatches 2; Indels
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TISSUE-SALIVARY GLANDS;
Fain-Thornton J.M., Jaworski D.C., Needham G.R.;
Submitted (NOV-1998) to the EMBL/GenBank/DDBJ databases.
EMBL; U07708, AAC79094.1;
InterPro; IPR000886; ER_target.
InterPro; IPR001580; Calreticulin.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pram; PF00262; calreticuin; 1.
PRINTS; PR00626; Calreticuin; 1.
Prodom; P001866; Calreticulin; 1.
PROSITE; PS00803; CALRETICULIN.1; 1.
PROSITE; PS00805; CALRETICULIN.REPER; 3.
PROSITE; PS00014; ER_TARETICULIN.REPER; 3.
SEQUENCE 410 AA; 47485 MW; 32CCB@750A17DC54 CRC64;
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Last annotation update)
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Pred. No. 2.2e-15;
                                                                                                                                142 VIFNYKGKNLLVKKDIRCKDDVFSHLYTLIVRPDN 176
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                                                                                                     1 VIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 35
                                                  3; Mismatches
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                                                                                                                                                                                                                                                                                                                                     Created)
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                                                                                                                                                                                                                                                                                  PRT;
88.9%;
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88.6%;
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Gaps

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Drosophila melanogaster (Fruit fly).
Eukaryota: Metazoa: Arthropoda: Tracheata: Hexapoda: Insecta:
Pteryota: Neoptera: Endopterygota: Diptera: Brachycera: Muscomorpha;
Ephydroidea: Drosophilldae; Drosophila.
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Brakryota: Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Actinopterygii; Neopterygii; Teleostei; Buteleostei; Ostariophysi;
Cypriniformes; Cyprinidae; Rasborinae; Danio.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Rubinstein A.L., Lee D., Luo R., Henion P.D., Halpern M.E.; Genes Dependent on Zebrafish cyclops Function Identified by AFLP Differential Gene Expression Screen."; Genesis 0:0-0(1999).

BMEL; AFIS9882; AAFI3700.1; -. InterPro; IPR000886; Ex.Larget.
InterPro; IPR001886; Calreticulin.
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Pred. No. 5.4e-14;
3; Mismatches 3; Indels
 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                          Submitted (JAN-1997) to the EMBL/GenBank/DDBJ databases. EMBL, AB000718; BAA85379.1; -. FlyBase; FBgn0005585; Crc.
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PROSITE; PS00805; CALRETICULIN_REPEAT; 3.
PROSITE; PS00014; BR_TARGET; UNKNOWN_1.
cpnifncr 406 AA; 46809 MW; 68BA49A6B81CC427 CRC64;
                                                                                                                                                                                    01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
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01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                              STRAIN-ORBGON-R;
Dodo K., Sakoyama Y., Gamo S.;
"Drosophila melanogaster calreticulin for mRNA.";
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                                                                                                                                                     406 AA
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                                   1 VIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 35
 1; Mismatches
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InterPro; IPR000886; ER_target.
Pfam; PF00262; calreticulin; I.
PRIMTS; PR00626; CALRETICULIN.
ProDom; PD001866; Calreticulin; 1.
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82.98;
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Best Local Similarity 82.99
30; Conservative
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CRC OR CG9429
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Q9U916;
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01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
CALRETICULIN PRECURSOR (FRAGMENT).
Xenopus laevis (African clawed frog).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi;
                                                                                                                     Treves S., Zorzato F., Pozzan T.; "Identification of calreticulin isoforms in the central nervous
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Treves S., Zorzato F., Pozzan T.; "Identification of calreticulin isoforms in the central nervous
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Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
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                                                                                                                                                                                                                                                                                                                                                                                                                 Length 343;
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                                                                                                                                                                                                                                                                                                                                             343 343
343 AA; 40105 MW; 3E7DDAFA33B91DE1 CRC64;
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CALRETICULIN.
891DA66E00EBBEFA CRC64;
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Pred. No. 2.1e-14;
                                                                                                                                                                                                                                                                                                                                                                                                               Score 161; DB 13;
Pred. No. 1.7e-14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     118 VIFQYKKKNLQINKDIRCKDDSFTHLYTLIVRPDN 152
                                                                                                                                                                                  411 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 VIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                 1; Mismatches
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PS00805; CALRETICULIN_REPEAT; ?
PS00014; ER_TARGET; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ProDom; PD001866; Calreticulin; 1. PROSITE; PS00803; CALRETICULIN_1;
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MEDLINE-93074997; Pubmed-1445218;
                                                                                   TISSUE-BRAIN;
MEDLINE-93074997; PubMed-1445218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Biochem. J. 287:579-581(1992).
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                                                                                                                                                                      Biochem. J. 287:579-581(1992).
                                                                                                                                                                                                                                                                                                                                                                                                               85.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     85.2%;
85.7%;
                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 85.77
Matches 30; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Xenopodinae; Xenopus.
NCBI_TaxID=8355;
                   Xenopodinae; Xenopus.
NCBI_TaxID=8355;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   411 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                  SEQUENCE FROM N.A.
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Q91710 Q91710;

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SEQUENCE NON_TER

PROSITE; PROSITE; PROSITE;

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Gaps

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Q26514 Q26514;

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Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Strongylida; Ancylostomatoidea; Ancylostomatidae; Bunostominae; Necator.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ó
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Pritchard D.I., Brown A., McElroy P., Loukas A., Girdwood K., Berty C., Fullkrug R., Beck E.;

"Calreticulin is a hookworm allergen.";

Submitted (JUN-1998) to the EMBL/GenBank/DDBJ databases.

EMBL. AJU06799; CAA07244.1;

InterPro; IPR0010886; ER_target.

InterPro; IPR0010880; Calreticulin.

Pfam; PF00262; Calreticulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 396;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 403;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                      Scott J.C.;
Submitted (JAN-1998) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                              PRINTS; PRO626; Calreticulin; 1.
PRINTS; PRO626; Calreticulin; 1.
PRO817E; PSO0803; CALRETICULIN.
PROSITE; PSO0803; CALRETICULIN.1; 1.
PROSITE; PSO0805; CALRETICULIN.2; 1.
PROSITE; PSO0805; CALRETICULIN.2; 1.
PROSITE; PSO0014; ER_TARGETICULIN.REPEAT; 2.
PROSITE; PSO0014; ER_TARGETICULIN.REPEAT; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                POTENTIAL.
21F38B0515487B6F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-NOV-1998 (TrEMBLrel. 08, Created)
01-NOV-1998 (TrEMBLrel. 08, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
CALRETICULIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 153; DB 5;
Pred. No. 2.6e-13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 153; DB 5;
Pred. No. 2.7e-13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              145 VIFNYKGQNHLIKKDIPCKDDQKTHLYTLIVRPDN 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 VIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         143 IFSYKGKNHI,IKKDIRCKDDELTHLYTLILNPDN 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 IFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROSITE; PS00803; CALRETICULIN_1; 1. PROSITE; PS00804; CALRETICULIN_2; 1. PROSITE; PS00805; CALRETICULIN_REPERT; 3. PROSITE; PS00014; ER_TARGET; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
                                                                                                                                                                     EMBL, AF044408; AAC00515.1; -.
InterPro; IPR000886; ER_target.
InterPro; IPR001580; Calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRINTS; PR00626; CALRETICULIN.
ProDom; PD001866; Calreticulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    81.0%; Score
/ 82.9%; Pred
2; h
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16 PC
46833 MW;
                               SEQUENCE FROM N.A. STRAIN-PHILIPPINE (MINDORO);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   81.0%;
82.4%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Necator americanus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity
Matches 29; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    403 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
nes 28; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Signal, Allergen.
SIGNAL 1
SEQUENCE 403 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID-51031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       076961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   076961
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Q98984
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           098984
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 11
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Schistosoma japonicum (Blood fluke).
Eukaryota: Metazoa: Platyhelminthes: Rhabditophora; Neodermata;
Trematoda: Digenea; Strigeidida; Schistosomatoldea; Schistosomatidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CALRETICULIN.
Schlatosoma japonicum (Blood fluke).
Eukaryota; Metazoa; Platyhelminthes; Rhabditophora; Neodermata;
Trematoda; Digenea; Strigeidida; Schistosomatoidea; Schistosomatidae;
Schlatosoma.
NCBI_TaxID 6182;
                                                                                                                                                                                                                                                                                                                                                                               Gaps
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                                                                                                                                                                                                                                                                                                        DB 13; Length 417;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Huggins M.C., Moloney N.A.;
Submitted (AUG-1993) to the EMBL/GenBank/DDBJ databases.
EMBL; MB0524; AAA2917.1;
InterPro; IPR001580; Calreticulin.
Priam; PP00263; calreticulin.
Priam; PP00263; calreticulin.
PRIATS; PR00626; Calreticulin.
PROBOM; P001866; Calreticulin.
PROSITE; PS00803; CALRETICULIN.
PROSITE; PS00804; CALRETICULIN.1;
PROSITE; PS00804; CALRETICULIN.2;
PROSITE; PS00804; CALRETICULIN.2;
PROSITE; PS00804; CALRETICULIN.3;
PROSITE; PS00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 350;
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                                                                                                                                                                                                                                                                                                                                                                           Indels
                        Prodom; PD01866; Calretteulin; 1.
PROSITE; PS00803; CALRETICULIN 1; 1.
PROSITE; PS00804; CALRETICULIN 2; 1.
PROSITE; PS00805; CALRETICULIN REPEAT; 3.
PROSITE; PS00014; FR_TARGET; UNKNOWN 1.
SEQUENCE 417 AA; 48723 MW; 2000C5B4004699B6 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 350 AA; 40385 MW; 30FAB4E8BB685D1C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            045034;
01-JUN-1998 (TrEMBLrel. 06, Created)
01-JUN-1998 (TrEMBLrel. 06, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-UNV-2001 (TrEMBLrel. 17, Last annotation update)
CALRETICULIN (FRAGMENP).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       81.0%; Score 153; DB 5; 82.9%; Pred. No. 2.3e-13;
                                                                                                                                                                                                                                                                                                     81.5%; Score 154; DB 13
illarity 82.4%; Prcd. No. 2e-13;
Conservative 3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    350 AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                              146 VIFNYKGONHLIKKDIKCKDDELTHLYTLILRPD 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 VIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                              1 VIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPD 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
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PR00626; CALRETICULIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity 82.9
Matches 29; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRELIMINARY;
                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 28; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCB1_TaxID 6182;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN CHINESE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NON_TER
SEQUENCE
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PRINTS;
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SEQUENCE FROM N.A. MEDLINE=99094497; PubMed=9879888; Tsuji N., Morales T.H., Ozols V.V., Carmody A.B., Chandrashekar R.; "Molecular characterization of a calcium-binding protein from the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Kuraku S., Hoshiyama D., Katoh K., Suga H., Miyata T.;
"Monophyly of lampreys and hagfishes supported by nuclear DNA-coded
                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Nematoda; Chromadorea; Spirurida; Filarioldea;
Onchocercidae; Dirofilaria.
NCBI_TaxID=6287;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eptatretus burgeri (Inshore hagfish).
Eukaryota; Metazoa; Chordata; Craniata; Hyperotreti; Myxiniformes;
Myxinidae; Eptatretinae; Eptatretus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 146; DB 5; Length 387;
Pred. No. 2.4e-12;
3; Mismatches 5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CALRETICULIN.
E7741BF6AAFA5885 CRC64;
                                                                                                                                                                                                                          01-MAY-1999 (TrEMBLrel. 10, Created)
01-MAY-1999 (TrEMBLrel. 10, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
CALREFICULIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-MAY-2000 (TrEMBLrel. 13, Last sequence update) 01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
77.1%; Pred. No. 2.4e-12;
                                                                                       144 VIFHYKGRNHMIKKDIRCKDDVFTHLYTLIVNSDN 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             321 AA
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                                                                   1 VIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3; Mismatches
                                   3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRINTS, PRO0562; Calreticulin; 1.
PRINTS, PRO0626; CALRETICULIN.
PROSTITE; PS00803; CALRETICULIN.1.
PROSTITE; PS00804; CALRETICULIN.2; 1.
PROSTIE; PS00805; CALRETICULIN.2; 1.
                                                                                                                                                                                          387 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mol. Biochem. Parasitol. 97:69-79(1998).
EMBL; AF052978; AAD03405.1; -.
InterPro; IPR001580; Calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   filarial parasite Dirofilaria immitis.
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77.18;
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Best Local Similarity 77.1.,
Conservative
                Best Local Similarity 77.1
Matches 27; Conservative
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387
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=7764;
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SEQUENCE
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                                                                                                                                                                                      SEQUENCE FROM N.A. MEDLINE-96234004; PubMed-8654561; Yamamoto S., Nakamura M.; "Calnexin: its molecular cloning and expression in the liver of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Litomosoides sigmodontis.
Eukaryota, Metazoa; Nematoda; Chromadorea; Spirurida; Filarioidea;
Onchocercidae; Litomosoides.
                                                                                                  Rana rugosa (Frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Amphibia; Batrachia; Anura; Neobatrachia; Ranoidea; Raniae; Rana.
                                                                                                                                                                                                                                                                                                                                             "Strong expression of the calreticulin gene in the liver of Rana rugosa Tadpoles.";
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Submitted (SEP-1997) to the EMBL/GenBank/DDBJ databases.
EMBL; AJ001621; CAA04087.1; -.
InterPro; IPR01050; Calreticulin.
Pfam: PF00262; calreticulin; 1.
Propom: PD001866; Calreticulin; 1.
PROSITE: PS00803; CALRETICULIN.; 1.
PROSITE: PS00804; CALRETICULIN.; 1.
PROSITE: PS00804; CALRETICULIN.; 1.
PROSITE: PS00805; CALRETICULIN.; 1.
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PRINTS; PRO0626; CALRETICULIN. 1
PRODOM; PD001866; CALRETICULIN. 1.
PROSITE; PS00804; CALRETICULIN. 1; 1
PROSITE; PS00805; CALRETICULIN. 2; 1
PROSITE; PS00805; CALRETICULIN. 2; 1
PROSITE; PS00805; CALRETICULIN. REPEAT; 3.
PROSITE; PS00014; ER_TARGET; UNKNOWN. 1.
SEQUENCE 419 AA; 48658 MW; 2C857036769673BF CRC64;
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01-JAN-1998 (TrEMBLrel. 05, Created)
01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
RAL-1 PROTEIN (FRAGMENT).
                             01-FEB-1997 (TrEMBLrel. 02, Created)
01-FEB-1997 (TrEMBLrel. 02, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                78.3%; Score 148; DB 13;
80.0%; Pred. No. 1.4e-12;
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EMBL, D78589; BAA11425.1; InterPro; IPR000886; ER_target.
InterPro; IPR001580; Calreticulin.
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FEBS Lett. 387:27-32(1996).
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Matches 28; Conserv
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                                                                                  CALRETICULIN.
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SEQUENCE
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Search completed: January 9, 2002, 15:03:30 Job time: 272 sec

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Calnexin sequence.

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C glutamicum prote Peptide Seg ID No:

Swinepox virus Hin Protein encoded by Plasmodium falcipa Fen(Y205D) mutant

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MBP-calreticulin; maltose binding protein; angiogenesis; inhibition; endothelial cell; anti-angiogenid; neuroprotective; antidiabetis; cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Inhibiting endothelial cell growth and angiogenesis using calreticulin, useful for suppressing tumor growth
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AAB32385
AAG24609
AAG30998
AAG24608
AAG47932
AAG47932
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Pike SE,
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WO200020577-A1.
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Synthetic.
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 Human vasostatin (
Recombinant delta-
Recombinant human
Calreticulin. Hom
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Human MBP-calretic
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Flea calreticulin
                                                                        Search time 83.2 Seconds (without alignments) 31.161 Million cell updates/sec
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Recombinant human
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          GenCore version 4.5
Copyright (c) 1993 - 2000 Compugen Ltd
                                                                                                                  US-09-828-000-7
189
1 VIENYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 35
                                                                                                                                                                                                                     Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                 522463 seqs, 74073290 residues
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Maximum Match 100%
Listing first 45 summaries
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                                                              Fragments of calreticulin causes at least 40% inhibition of anglogenesis, tumor growth and/or endothelial cell growth (claimed). The method may be used for inhibiting anglogenesis in a patient. The anglogenesis, tumor growth and/or endothelial cell growth (claimed). The method may be used for inhibiting anglogenesis in a patient. The anglogenesis is associated with a disease other than a tumor that is associated with necovascularization (e.g. diabetic neuropathy, retrolental fibroplasis, fractional artachoma, necovascular diancoma, psoriasis, anglofibromas, immune inflammation, atheroscierosis, excessive wound repair, retinal necovariation, macular degeneration, conneal graft rejection, rhumatoid arthritis, systemic lupus crythromatosus, thyroiditis, goodpasture's syndrome, systemic lupus crythromatosus, thyroiditis, goodpasture's syndrome, systemic vasculitis, scleroderma, sjorgen's also, be used for treating/inhibiting tumor growth especially
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MBP-calreticulin; maltose binding protein; anglogenesis; inhibition; endothelial cell; anti-anglogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-atherosclerotic; gustrointestinal; anti-arthritic; ophthalmic.
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                                                  inhibiting endothelial cell growth comprises
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100.0%; Pred. No. 1.3e-22;
tive 0; Mismatches 0;
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             Claim 4; Page 85; 99pp; English
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                                                                                                                                                                                                                                                                                                                                      Kaposi's sarcoma (claimed).
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Best Local Similarity
Matches 35; Conserv
                                                  novel method of
                                                                                                                                                                                                                                                                                                                                                                       60 AA;
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                                                                                                                                                                                                                                                                                                                                                                       Sednence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Inhibiting endothelial cell growth and angiogenesis using calreticulin, useful for suppressing tumor growth
                                                  neovascularization (e.g. diabetic neuropathy, retrolental fibroplasia, trachoma, neovascular glaucoma, psoriasis, angiofibromas, immunue inflammation, atherosclerosis, excessive wound repair, retinal neovascularization, macular degeneration, corneal graft rejection, contact lens overwear, Crohn's disease, non-immune inflammation, rheumatoid arthritis, systemic lupus erythromatosus, thyroiditis, Goodpasture's syndrome, systemic vasculitis, scleroderma, Sjorgen's syndrome, sarcoidosis and primary biliary cirrhosis). The method may kaposi's sarcoma (claimed).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       associated with a disease other than a tumor that is associated with neovascularization (e.g. diabetic neuropathy, retrolental fibroplasia, trachoma, neovascular glaucoma, psoriasis, anglofibromas, immune inflammation, atherosclerosis, excessive wound repair, retinal neovascularization, macular degeneration, corneal graft rejection,
                                associated with a disease other than a tumor that is associated with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
The angiogenesis is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MBP-calreticulin; maltose binding protein; vasostatin; N-terminal; angiogenesis; inhibition; endothelial cell; anti-angiogenic; encroprotective; antidiabetic; cytostatic; dermalogical; hepatic; immunosuppressive; antidiflammatory; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 61;
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for inhibiting angiogenesis in a patient.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2000-303767/26
                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 AA;
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Kaposi's sarcoma (claimed).
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missing the N-terminal 120 amino acids.
A novel method of inhibiting endothelial cell growth comprises
contacting the cells with calreticulin (or its fragments/variants).
Fragments of calreticulin causes at least 40% inhibition of
majogenesis, tumor growth and/or endothelial cell growth (claimed). The
contacting the used for inhibiting angiogenesis in a patient. The
contact lassociated with a disease other than a tumor that is
associated with neovascularization (e.g. diabetic neuropathy, retrolental
fibroplasia, trachoma, neovascular glaucoma, psoriasis, angiofibromas,
immunote inflammation, atherosclerosis, excessive wound repair, retinal
neovascularization, ancular degeneration, corneal graft rejection,
contact lens overwear, Crohn's disease, non-immune inflammation,
cheumatoid arthritis, systemic lupus erythromatosus, thyroiditis,
contact lens syndrome, systemic vasculitis, scleroderma, Sjorgen's
cyndrome, sarcoidosis and primary billiary cirrhosis). The method may
also be used for treating/inhibiting tumor growth especially
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MBP-calreticulin; maltose binding protein; angiogenesis; inhibition; endothelial cell; anti-angiogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-atherosclerotic; gastrointestinal; anti-atheritic; ophthalmic.
contact lens overwear, Crohn's disease, non-immune inflammation, rheumatoid arthritis, systemic lupus erythromatosus, thyroiditis, Goodpasture's syndrome, systemic vasculitis, scleroderma, Sjorgen's syndrome, sarcoidosis and primary biliary cirrhosis). The method may also be used for treating/inhibiting tumor growth especially Kaposi's sarcoma (claimed).
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                                                                                                                                                                                                                                                                                                                                                 Length 180;
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4.9e-22;
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s; Pred. No. 4.90
0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAY92355 standard; Protein; 280
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100.0%;
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Best Local Similarity 100.
Matches 35; Conservative
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                                                                                                                                                                                                                                           180 AA;
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                                                                                                                                                                                                                                               Sequence
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Recombinant human MBP-calreticulin comprises the sequence of human calreticulin (see AAY92349) without the 17 N-terminal amino acids.

A novel method of inhibiting endothelial cell growth comprises contacting the cells with calreticulin (or its fragments/variants).

Fragments of calreticulin causes at least 40% inhibition of angiogenesis, tumor growth and/or endothelial cell growth (claimed). The method may be used for inhibiting angiogenesis in a patient. The angiogenesis is associated with a disease other than a tumor that is associated with neovascularization (e.g. diabetic neuropathy, retrolental fibroplasia, trachoma, neovascular glaucoma, psoriasis, angiofibromas, immune inflammation, atherosclerosis, excessive wound repair, retinal neovascularization, macular degeneration, corneal graft rejection, chematoid arthritis, systemic lupus erythromacous, thyroiditis, contact lens overwear, Crohn's disease, non-immune inflammation, rheumatoid arthritis, systemic lupus erythromacous, thyroiditis, systemic vasculitis, soleroderma, Sjorgen's syndrome, sarcoidosis and primary billary cirrhosis). The method may also be used for tracting/inhibiting tumor growth sepecially
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             endothelial cell; anti-angiogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Inhibiting endothelial cell growth and angiogenesis using calreticulin,
                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MBP-calreticulin; maltose binding protein; angiogenesis; inhibition;
                                                                  ö
Length 280;
                                                                  Indels
100.0%; Score 189; DB 21; 100.0%; Pred. No. 8.4e-22;
                                                                                                                                    1 VIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 35
                                                              0; Mismatches
                                                                                                                                                                       (USSH ) US DEPT HEALTH & HUMAN SERVICES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    useful for suppressing tumor growth
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                                                                                                                                                                                                                                                                                                                                                                       AAY92350 standard; Protein; 400
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                                                                  Conservative
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                           Best Local Similarity
Matches 35; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   400 AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                          AAY92350;
   Query Match
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Clg and collectin receptor; cclqR binding domain; complement ubiquitin; CUB functionality; inhibitor; complement activation; inflammation; myocardial infarction; brain ischaemia; gut ischaemia; amyloid plaque; rheumatoid arthritis; systemic lupus erythematosus; Alzheimer's disease; immune complex nephritis; therapy.
                                                                                                                                                                                                                                                                                                                                                   Synthetic peptides corresp. to an epitopic core of Ro antigen are expressed recombinantly to detect autoantibodies, for identification of autoimmune diseases. These epitopes are AAs 24.36, 23-36, 188-209, or 241-255. The peptides may be substd. for ribonucleoprotein particle
                                                                                                                                                                                                                                                                             DNA sequences encoding antigenic epitope(s) of Ro 60 kD autoantigen - used in immunoassays to detect rheumatic disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 417;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; Score 189; DB 10;
ilarity 100.0%; Pred. No. 1.4e-21;
Conservative 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                        Disclosure; Fig 2; 88pp; English.
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                                                                                                                    89WO-US01213.
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                                                                                                                                                                                                      Capra JD,
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les 35; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAY00927 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                          417 AA;
                                                                                                                                                                                                                                                  N-PSDB; AAP92276
                                                                                                                                                                                                        Sontheimer RD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Calreticulin.
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                                                                                                                    22-MAR-1989;
                                                                                                                                               22-MAR-1988;
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                                Synthetic.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The present sequence is calreticulin. It and a C-domain derived peptide (AAM06736) are useful for treating a patient to inhibit restenosis. The calreticulin-type roges are administered either parenterally, intravenously or via a catherer and can target areas of vascular damage to inhibit or prevent restenosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                              Gaps
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                 Length 400;
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                                            Indels
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              Score 189; DB 21;
Pred. No. 1.3e-21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sjorens syndrome; systemic lupus erythematosus.
                                                                                                                                                                                                                                                                                          calreticulin; C-domain; restenosis; inhibitor.
100.0%; Scol.
100.0%; Pred No. 1.
0; Mismatches
                                                                                      129 viinykgknvlinkdirckddefthlytlivrpdn 163
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                                                                         1 VIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 35
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                                                                                                                                                                        AAW11156 standard; peptide; 401
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              Query Match
Best Local Similarity 100.
Matches 35; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Michalak M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (UYAL-) UNIV ALBERTA.
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                                                                                                                                                                                                                                                               Calreticulin.
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17-MAY-1995;
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Best Local S
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                                              This sequence is calreticulin, a homologue of C1q and collectin receptor cCC1qR). The invention relates to the use of a cC1qR binding domain in a medicament to effect complement ubiquitin (CUB) functionality, and an inhibitor of the cC1qR binding domain in a medicament to inhibit cub functionality. The cC1qR binding domain, or its inhibitor, can be used to freat a human or animal body. Particularly an inhibitor is used to complement activation involved in the initiation and maintenance of inflammation, for example in mycardial infarction, brain ischaemia (stroke), gut ischaemia, rheumatoid arthritis, systemic lupus erythematous, burns, immune complex nephritis, and to treat amyloid plaques in Alzheimer's disease. The use of cC1qR binding domain or inhibitor enables the CUB domain functionality to be modulated using a
                                                                                                                                                                                                                                                                                                                                                                                                                                   MBP-calreticulin; maltose binding protein; angiogenesis; inhibition; endothbalaa cell; anti-angiogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      endothelial cell growth and angiogenesis using calreticulin,
                                                                                                                                                                                                                                                      Gaps
 of a cClqR binding domain - to modulate complement ubiquitin
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                                                                                                                                                                                                                               Length 417;
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                                                                                                                                                                                                                               Score 189; DB 20;
Pred. No. 1.4e-21;
                                                                                                                                                                                                                                                                                    1 VIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 35
                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (USSH ) US DEPT HEALTH & HUMAN SERVICES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /label= signal_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /label= mature_protein
                              Disclosure; Page 26-27; 31pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Disclosure; Page 79-80; 99pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  suppressing tumor growth
                                                                                                                                                                                                                                                                                                                                                 AAY92349 standard; Protein; 417 AA
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                                                                                                                                                                             .ow molecular weight molecule.
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                                                                                                                                                                                                                             Query Match 100.
Best Local Similarity 100.
Matches 35; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                Human MBP-calreticulin.
          (CUB) functionality.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2000-303767/26
                                                                                                                                                                                                 417 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens.
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                                                                                                                                                                                                  Sednence
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A novel method of inhibiting endothelial cell growth comprises contacting the cells with calreticulin (or its fragments/variants). Fragments of calreticulin causes at least 40% inhibition of angiogenesis, tumor growth and/or endothelial cell growth (claimed). The method may be used for inhibiting angiogenesis in a patient. The angiogenesis is associated with a disease other than a tumor that is associated with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             endothelial cell; anti-angiogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
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                                                                                                                                                                                                                       neovascularization (e.g. diabetic neuropathy, retrolental fibroplasia, trachoma, neovascular glaucoma, psoriasis, angiofibromas, immmune inflammation, atherosclerosis, excessive wound repair, retinal neovascularization, macular degeneration, corneal graft rejection,
                                                                                                                                                                                                                                                                                                                                                                                  contact lens overwear, Crohn's disease, non-immune inflammation, rheumatoid arthritis, systemic lupus erythromatosus, thyroiditis, Goodpasture's syndrome, systemic vascuiltis, scleroderma, Sjorgen's syndrome, sarcoidosis and primary biliary cirrhosis). The method may also be used for treating/inhibiting tumor growth especially Raposi's sarcoma (claimed).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MBP-calreticulin; maltose binding protein; angiogenesis; inhibition;
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neovascularization (e.g. diabetic neuropathy, retrolental fibroplasia, trachoma, neovascular glaucoma, psoriașis, angiofibromas, immmune inflammation, atherosclerosis, excessive wound repair, retinal neovascularization, macular degeneration, corneal graft rejection, contact lens overwear, Crohn's disease, non immune inflammation, rheumatoid arthritis, systemic lupus erythromatosus, thyroiditis, goodpasture's syndrome, systemic vasculitis, scleroderma, Sjorgen's syndrome, surcoldosis and primary biliary cirrhosis). The method may also be used for treating/inhibiting tumor growth especially Kaposi's sarcoma (claimed).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Haematophagous insect calreticulin protein - used to reduce insect infestation and desensitise patients to allergic dermatitis
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 92.6%; Score 175; DB 21;
Best Local Similarity 100.0%; Pred. No. 1.7e-20;
Matches 32; Conservative 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ctenocephalides felis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 1996-442861/44.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (HESK-) HESKA CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            403 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N-PSDB; AAT39516;
N-PSDB; AAT39517.
                                                                                                                                                                                                                                                                                                                                                                                       49 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO9628469-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  08-MAR-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  09-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Rushlow KE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12-DEC-1996
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                                                                                                                                                                                                                                                                                                                                                                                           Sequence
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The sequence was deduced from a cDNA clone lambda RAL-1 prepd. from RNA isolated from nodules excised from patients infected with O. volvulus. The N-terminal is incomplete, however Abs which specifically the N-terminal is incomplete, however Abs which specifically the N-terminal is incomplete, however Abs owlich specifically the N-terminal is incomplete, however Abs of lambda RAL-1 lysogens recognise a single polypeptide of mol. W. 42.000 in extracts of adult worms. Analysis deduced sequence suggests that it encodes a protein of mol. Wt. 39,130. If the antigen is not subject to post-translational processing this suggests that most of the coding sequence is present. The three repeats are highly hydrophilic regions likely to be exposed on the surface of the antigen and highly immunogenic. Recombinant antiginal expressed by the clone can be used stimulate T-cells of individuals infected by the parasite to proliferate and may be used as the basis for a vaccine against Onchocerciasis or river
                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               volvulos antigen - used to express vaccine against onchocerclasis or river
                                          .
0
            Length 403;
                                                                                                                                                                                                                                                                                       River blindness; onchocerciasis; vaccine; antigen; parasite.
                                          Indels
                                                                                                                                                                                                                                                            Partial sequence of Onchocera volvulus 42 kD antigen.
             DB 17;
Score 167; DB 1,,
                                                                                    1 VIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 35
                           Pred. No. 4.1e
5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                        177..183
/label= repeat unit
/note= "hydrophilic"
                                                                                                                                                                                                                                                                                                                                                                                                                                               //195..201
//label= repeat unit
/note= "hydrophilic"
                                                                                                                                                                                                                                                                                                                                                                           /label- repeat unit
/note= "hydrophilic"
                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                        AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Disclosure; Fig 7; 20pp; English.
                                                                                                                                                                      AAR12312 standard; Protein; 336
            88.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    88US-0214264.
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                                                                                                                                                                                                                               (first entry)
                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA encoding Onchocerca recombinant antigen for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unnasch TR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 1991-185179/25.
                                                                                                                                                                                                                                                                                                                    Onchocerca volvulus
                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N-PSDB; AAQ11987
                                                                                                                                                                                                                               29-AUG-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30-JUN-1988;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30-JUN-1988;
            Query Match
Best Local Simmatches 29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US5021342-A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Greene BM,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           blindness.
                                                                                                                                                                                                   AAR12312;
                                                                                                                                                                                                                                                                                                                                                              Region
                                                                                                                                                                                                                                                                                                                                                                                                           Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Region
                                                                                                                                                         AAR12312
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(first entry)

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Rat cClqR binding domain protein sequence.
                                                                             AAY00926 standard; Protein; 122
1 rckddefthlytlivrpdn 19
                                                                                                                                          28-MAY-1999
                                                                                                          AAY00926:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This sequence is a clq and collectin receptor (cClqR) binding domain. The invention relates to the use of a cClqR binding domain in a medicament to effect complement ubiquitin (CUB) functionality, and an inhibitor of the cClqR binding domain in a medicament to inhibit cUB functionality. The cClqR binding domain, or its inhibitor, can be used to treat a human or animal body. Particularly an inhibitor is used to treat complement activation involved in the initiation and maintenance of inflammation, for example in mycardial infarction, brain ischaemia (Stroke), gut ischaemia, rheumatoid arthritis, systemic lupus
                                                                                                                                                                                                                                                                                                                                                      Clq and collectin receptor; cClqR binding domain; complement ubiquitin; CUB functionality; inhibitor; complement activation; inflammation; myocardial infarction; brain ischaemia; gut ischaemia; amyloid plaque; rheumatoid arthritis; systemic iupus erythematosus; Alzheimer's disease; immune complex nephritis; therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 erythematosus, burns, immune complex nephritis, and to treat amyloid plaques in Alzheimer's disease. The use of cClqR binding domain or inhibitor enables the CUB domain functionality to be modulated using a
                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Use of a cClqR binding domain - to modulate complement ubiquitin
                                                                             ;
                                           Length 336;
                                                                             Indels
                                               DB 12;
                                               Score 139; DB 12;
Pred. No. 9.2e-14;
                                                                                                                            Human cClqR binding domain protein sequence.
                                                                                                          1 VIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 35
                                                                           3; Mismatches
                                                                                                                                                                                                                         AAY00924 standard; Protein; 122 AA
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100.0%; Pre
0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    low molecular weight molecule.
                                             Query Match 73.5%;
Best Local Similarity 74.3%;
Matches 26; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98WO-GB02430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   97GB-0016998
                                                                                                                                                                                                                                                                                           (first entry)
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336
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                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12-AUG-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12-AUG-1998;
                                                                                                                                                                                                                                                                                        28-MAY-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Schwaeble W;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18-FEB-1999.
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Sequence
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Clq and collectin receptor; cclqR binding domain; complement ubiquitin; CUB functionality; inhibitor; complement activation; inflammation; myocardial infarction; brain ischbemia; gut ischaemia; amyloid plaque; rheumatoid arthritis; systemic lupus erythematosus; Alzheimer's disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Use of a cClqR binding domain - to modulate complement ubiquitin
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 107; DB 20;
Pred. No. 3.2e-09;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 9; Page 24-25; 31pp; English.
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                                                                                                                       immune complex nephritis; therapy.
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100.08; Pre
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (UYLE-) UNIV LEICESTER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (CUB) functionality.
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                                                                                                                                                                               Rattus norvegicus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N-PSDB; AAX27253
                                                                                                                                                                                                                                                                                                                                                                                                         12-AUG-1997;
                                                                                                                                                                                                                                     W09907406-A1
                                                                                                                                                                                                                                                                                                                                                12-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Schwaeble W;
                                                                                                                                                                                                                                                                                             18-FEB-1999,
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ID AAB6
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AC AAB6
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Indels

Length 122;

Score 107; DB 20; Pred. No. 3.2e-09; 0; Mismatches 0;

RCKDDEFTHLYTLIVRPDN 35

17

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Conservative

Query Match Best Local Similarity Matches 19; Conserv

05-APR-2001 (first entry)

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The present invention provides the protein and coding sequences for the castor bean calreticulin protein and the calreticulin promoter sequence. In addition, the castor bean calrexin protein, coding sequence and promoter are also described. Calreticulin and calnexin are calcium binding proteins found in the endoplasmic reticulum (er). The calreticulin promoter sequence can be used in vectors to promote the exprension of foreign genes, particularly resistance genes, in plant
                                                                                                                                                                                                                                                                                                                                                                        New nucleic acid molecules encoding a calcium binding chaperone protein in endoplasmic reticulum, calreticulin, and calreticulin promoter sequences, useful for producing foreign gene products in plant cells -
                                                            Castor bean; calreticulin; calcium binding; er; endoplasmic reticulum; calnexin; promoter; resistance.
                              Castor bean calreticulin SEQ ID NO: 2.
                                                                                                                                                                                                                                                                (PION-) PIONEER HI-BRED INT INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 1; Fig 3; 45pp; English.
                                                                                                                                                                                                                                   96US-0675816.
                                                                                                                                                                                                      96US-0675816.
                                                                                                                                                                                                                                                                                                                                            N-PSDB; AAF29741, AAF29742
                                                                                                                                                                                                                                                                                             Coughlan SJ, Winfrey RJ;
                                                                                                                                                                                                                                                                                                                              WPI; 2001-122335/13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              415 AA;
                                                                                                         Ricinus communis
                                                                                                                                        US6171864-B1.
                                                                                                                                                                                                                                 05-JUL-1996;
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                                                                                                                                                                     09-JAN-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
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Search completed: January 9, 2002, 15:01:14 Job time: 160 sec

2 IFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPD 34

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Gaps ö

Query Match 55.6%; Score 105; DB 22; Length 415; Best Local Similarity 51.5%; Pred. No. 3e-08; Matches 17; Conservative 7; Mismatches 9; Indels

OM protein

Run on:

Sequence:

Minimum DB Maximum DB

Database

Searched:

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073634 xenopus lae
073634 xenopus lae
091045 arabidopsis
040040 hordeum vul
040041 hordeum vul
057693 thermoprote
09aw69 guillardia
                                                                                                                                                    Q41799 zea mays (m Q4179 zea mays (m Q44712 zea mays (m Q9dhm5 yaba-like d O58084 pyrococcus P79232 papio hamad Q9uzy6 pyrococcus Q44795 borrelia bu Q40126 lycopersico Q9xpx5 spyridium p Q9xpx3 adolphia ca Q9xpx3 arabidopsis Q9mas2 arabidopsis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
MEDILNE-20063780; Pubmed-10594174;
Kurku S., Hoshiyama D., Katoh K., Suga H., Miya'ta T.;
"Monophyly of lampreys and hagfishes supported by nuclear DNA-coded
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Hyperoartia;
Petromyzontiformes; Petromyzontidae; Lampetra.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         92.7%; Score 89; DB 13; Length 318; 94.4%; Pred. No. 5.8e-06;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (TrEMBLrel. 13, Created)
(TrEMBLrel. 13, Last sequence update)
(TrEMBLrel. 17, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     318 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Mismatches
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PRINTS; PR00626; CALRETICULIN.
ProDom; PD001866; CALRETICULIN.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 3.
PROSITE; PS00014; ER_TARGET; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                           ALIGNMENTS
057577
057576
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J. Mol. Bvol. 49:729-735(1999).
BmEL; AB025328; BAA88481.1; -.
InterPro; IPR000886; ER. target.
InterPro; IPR001580; Calreticulin.
                                                                                                                                                                                                                                                                                                                                Q9TNG4
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CALRETICULIN (FRAGMENT).
 Lampetra reissneri.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             318 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity
NCBI_TaxID=7753;
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Q9PTX7;
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 RESULT
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Q2658 aplysia cal
Q16693 amblyomma a
Q9u916 drosophila
Q98984 rana rugosa
Q9pucl brachydanio
O76961 necator ame
Q91711 xenopus lae
Q91732 ditofilaria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              073736 brachydanio
09dgi6 brachydanio
048830 lactobacill
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Q26514 schistosoma
O45034 schistosoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q9ptx7 lampetra re
                                                                                                     Search time 78.15 Seconds (without alignments) 33.690 Million cell updates/sec
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000557 homo sapien
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              GenCore version 4.5
Copyright (c) 1993 - 2000 Compugen Ltd.
                                                                                                                                                                                                                                                                                                             Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                473505 seqs, 146272329 residues
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Maximum Match 100%
Listing first 45 summaries
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    protein search, using sw model

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sp_organelle:*
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Result ŝ

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Amblyomma americanum.
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Best Local Similarity
Matches 15; Conserv
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                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.

Susan J.M., Just M.L., Lennarz W.J.;

Susan J.M., Just M.L., Lennarz W.J.;

Susan J.M., Just M.L., Lennarz W.J.;

"Cloning and Characterization of AlphaP Integrin and Calreticulin in

"Cloning at the Sea Urchin.";

II. Submitted (AUG-1999) to the EMBL/GenBank/DDBJ databases.

III. Submitted (AUG-1999) to the EMBL/GenBank/DDBJ databases.

RADDS (1999) to the EMBL/GenBank/DDBJ databases.

III. RADDS (1999) to the EMBL/GenBank/DDBJ databases.

RICTPO: JPR001580; Calreticulin.

R PRINTS; PR00526; Calreticulin.

R PRINTS; PR00626; Calreticulin.

R PRODOR: PD001866; Calreticulin.

R PROSTIE; PS00804; Calreticulin.

R PROSTIE; PS00805; CALRETICULIN. 1.

R PROSTIE; PS00805; CALRETICULIN. REPEAT.

R PROSTIE; PS00014; ER_TARGET; UNKNOWN.1.
                                                                                                                                                                                                    Strongylocentrotus purpuratus (Purple sea urchin).
Eukaryota; Metazoa; Echinodermata; Eleutherozoa; Echinozoa;
Echinoldea; Eucchinoidea; Echinoidea; Strongylocentrotidae;
Strongylocentrotus.
NCBI_TaxID-7668;
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Eukaryota; Metazoa; Mollusca; Gastropoda; Opisthobranchia; Anaspidea;
Aplyalidae; Aplysia.
NCBI_TaxID 6500;
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Kennedy T.E., Kuhl D., Barzilai A., Sweatt J.D., Kandel E.R.;
"Long-term sensitization training in Aplysia leads to an increase in calreticulin, a major presynaptic calcium-binding protein.";
Neuron 9:1013-1024(1992).
EMBL; S51239; AAB24569.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
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Pred. No. 1.6e-05;
1; Mismatches 1; Indels
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PRINTS, PRODES, CALRETICULIN.
PRODESTE, PRODES, CALRETICULIN.
PROSITE, PSOOB03, CALRETICULIN.
PROSITE, PSOOB03, CALRETICULIN.
PROSITE, PSOOB05, CALRETICULIN.
PROSITE, PSOOB05, CALRETICULIN.
PROSITE, PSOOB04, SA, 46738 MW; 14CAA201840D1D69 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121 CALRETICULIN.
48822 MW; 172C664F59F41F93 CRC64;
                                                                                                    Last sequence update)
Last unnotation update)
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01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
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                          421 AA
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                                                                            Created)
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                          PRT;
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InterPro, IPR001580; Calreticulin.
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                                                                       01-MAY-2000 (TrEMBLrel, 13, 01-MAY-2000 (TrEMBLrel, 13, 01-JUN-2001 (TrEMBLrel, 17, 12, CALRETICULIN PRECURSOR,
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Brut Local Similarity 88.9
Matches 16; Conservative
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                          PRELIMINARY;
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                                             Gaps
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Jaworski D.C., Simmen F.A., Lamoreaux W.J., Coons L.B., Muller M.T.,
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                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Arthropoda; Chelicerata; Arachnida; Acari;
Parasitiformes; Ixodida; Ixodidae; Amblyomma.
NCBI_TaxID~6943;
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Length 405;
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TISSUE-SALIVARY GLANDS;
Fain Thornton J.M., Jaworski D.C., Needham G.R.;
Submitted (NOV-1998) to the EMBL/GenBank/DDBJ databases.
EMBL, 007708; AAG79094.1; -
InterPro; IPR000886; ER_target.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Jaworski D.C.;
Submitted (MAR-1994) to the EMBL/GenBank/DDBJ databases
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                                                                                                                                                                                                                                                                            01-NOV-1996 (TrEMBLrel. 01, Created)
01-JAN-1999 (TrEMBLrel. 09, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
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Last annotation update)
Score 86; DB 5; 1
Pred. No. 2.1e-05;
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Pred. No. 3.1e-05;
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                                             Mismatches
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PRINTS; PRO0626; CALRETICULIN.
PRODOM; PD001866; Calreticulin; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 3.
PROSITE; PS00014; ER_TARGET; UNKNOWN_1.
SEQUENCE 410 AA; 47485 MW; 32CCB8750A1
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Drosophila melanogaster (Fruit fly).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   J. Insect Physiol. 41:369-375(1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
                                                                                                                                                                                                                                          PRT;
89.68;
83.38;
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88.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE OF 49-410 FROM N.A.
                                                                                                         PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    145 VIFNYKGKNHLINKEIRC 162
                                                                                   1 VIFNYKGKNVLINKDIRC 18
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Best Local Similarity 88.9
Matches 16, Conservative
                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
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TISSUE-SALIVARY GLANDS;
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Conservative

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Matches
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076961
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                         Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroidea; Drosophilidae; Drosophila.
NCBI_TaxID=7227;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE-96234004; PubMed-8654561;
Yamamoto S., Nakamura M.;
"Calnexin: its molecular cloning and expression in the liver of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rana rugosa (Frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Neobatrachia; Ranoidea; Ranidae; Rana.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rana
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Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Yamamoto S.;
"Strong expression of the calreticulin gene in the liver of rugosa Tadpoles.";
Tugosa Tadpoles.";
J. Exp. Zool. 0:-0(1996).
EMBL: D78589; BAA11425.1;
InterPro; IPR000886; ER_target.
InterPro; IPR001880; Calreticulin.
                                                                                                                                                         Dodo K., Sakoyama Y., Gamo S.;

Dodo K., Sakoyama Y., Gamo S.;

"Drosophila melanogaster calreticulin for mRNA.";

L Submitted (JAN.1997) to the EMBL/GenBank/DDBJ databases.

EMBL; AB000718; BaA485379.1; -.

R FlyBase; FBgn0005585; Crc.

InterPro; IPR001580; Calreticulin.

R InterPro; IPR001886; ER_Larget.

R Pfam; PF00262; calreticulin. 1.

R PRINTS; PR00626; Calreticulin. 1.

R PPTDODM; PD01866; Calreticulin. 1.

R PROSITE; PS00803; CALRETICULIN. 1.

R PROSITE; PS00804; CALRETICULIN. 2; 1.

R PROSITE; PS00804; CALRETICULIN. 2; 1.

R PROSITE; PS00805; CALRETICULIN. 2; 1.

R PROSITE; PS00805; CALRETICULIN. 2; 1.

R PROSITE; PS00805; EALRETICULIN. 2; 1.

R PROSITE; PS00805; CALRETICULIN. 2; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 79; DB 5; Length 406;
Pred. No. 0.00026;
2; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PROSITE; PSUUBUJ; CALRETICULIN_2; 1.
PROSITE; PSUO804; CALRETICULIN_2; 1.
PROSITE; PSUO805; CALRETICULIN REPEAT; 3.
PROSITE; PSUO014; ER_TARGET; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Last sequence update)
Last annotation update)
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Pred. No. 0.00038;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   419 AA
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ProDom; PD001866; Calreticulin; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Created)
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88.2%;
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83.3%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     098984;
01-FEB-1997 (TrEMBLrel. 02,
01-FEB-1997 (TrEMBLrel. 02,
01-JUN-2001 (TrEMBLrel. 17,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    146 VIFSYKGKNHLISKDIRC 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          frog, Rana rugosa.";
FEBS Lett. 387:27-32(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 VIFNYKGKNVLINKDIRC 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 82.3
Best Local Similarity 83.3
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
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Best Local Similarity
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                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                             STRAIN-OREGON-R;
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Ancylostomatoidea; Ancylostomatidae; Bunostominae; Necator.
                                                                                                                                                                                                                                                                        Brachydanio rerio (Zebrafish) (Zebra danio).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei; Ostariophysi;
Cypriniformes; Cyprinidae; Rasborinae; Danio.
                                                                                                                                                                                                                                                                                                                                                                                                                     Rubinstein A.L., Lee D., Luo R., Henion P.D., Halpern M.E.; "Genes Dependent on Zebrafish cyclops Function Identified by AFLP Differential Gene Expression Screen."; Genesis 0:0-0(1999).
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SEQUENCE FROM N.A.
Pritchard D.I., Brown A., McElroy P., Loukas A., Girdwood K.,
Berry C., Fullkrug R., Beck E.;
"Calreticulin is a hookworm allergen.";
Submitted (JUN-1998) to the EMBL/GenBank/DDBJ databases.
EMBL, AJ006790; CAA07254.1;
InterPro; IPR000886; ER_target.
InterPro; IPR001880; Calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            79.2%; Score 76; DB 13; Length 417; 77.8%; Pred. No. 0.00077; Live 2; Mismatches 2; Indels
Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000C5B4004699B6 CRC64;
                                                                                                                                                                                                           01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
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Last annotation update)
                                                                                                                                                                           417 AA.
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PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 3.
PROSITE; PS000014; ER_TARGET; UNKNOWN 1.
SEQUENCE 417 AA; 48723 MW; 2000C5B4004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Created)
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InterPro; IPR000886; ER_target.
InterPro; IPR001580; Calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pfam; PF00262; calreticulin; 1. PRINTS; PR00626; CALRETICULIN. ProDom; PD001866; Calreticulin; 1.
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PRINTS; PR00626; CALRETICULIN.
ProDom; PD001866; Calreticulin; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 VIFNYKGKNVLINKDIRC 18
                                                              1 VIFNYKGKNVLINKDIR 17
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                                                                                                                                                                           PRELIMINARY;
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SEQUENCE FROM N.A.
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MEDLINE-99004497: PubMed-9879888;
Tsuji N., Morales T.H., Ozols V.V., Carmody A.B., Chandrashekar R.;
"Molacular characterization of a calcium-binding protein from the
filarial parasite Dirofilaria immitis.";
Mol. Biochem. Parasitol. 97:69-79(1998).

EMBL; AF052978; AAD03405.1;
Interpro, IPR001580; Calreticulin.
Pfam; PF00262; calreticulin; I.
PRINTS; PR00526; CALRETICULIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Nematoda; Chromadorea; Spirurida; Filarioidea; Onchocercidae; Dirofilaria.
             MacLennan K., Hoffman W.H., Taylor D.W.;
MacLennan K., Hoffman W.H., Taylor D.W.;
Submitted (SEP-1997) to the EMBL/GenBank/DDBJ databases.
EMBL; AJ001621; CAA040877.1; -.
R InterPro; IPR001850; Calreticulin.
R Pfam; PF00262; calreticulin; 1.
R PRINS; PR00626; CALRETICULIN.
R PRODOM; PD001866; CALRETICULIN.
R PROSITE; PS00804; CALRETICULIN.; 1.
                                                                                                                                                                                                                                                                                           Length 375;
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Pred. No. 0.0021;
3; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                   375 AA; 43842 MW; 03F7642FBFF7A5B8 CRC64;
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E7741BF6AAFA5885 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-MAY-1999 (TrEMBLrel. 10, Created)
1-MAY-1999 (TrEMBLrel. 10, Last sequence update)
01-UNN-2001 (TrEMBLrel. 17, Last annotation update)
CALRETICULIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  091710 PRELIMINARY; PRT; 411 AA. 091710; 01-JAN-1998 (TrEMBLrel. 05, Created) 01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
                                                                                                                                                                                                                                                                                           76.0%; Score 73; DB 5; 72.2%; Pred. No. 0.002;
                                                                                                                                                                                                                                                                                                                             3; Mismatches
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PROSITE; PS00804; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00804; CALRETICULIN_REPEAT; 3.
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| 144 VIFHYKGRNHMIKKDIRC 161
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                                                                                                                                                                                                                                                                                                                                                                  1 VIFNYKGKNVLINKDIRC 18
                                                                                                                                                                                                                                                                                                        Best Local Similarity 72.2
Matches 13; Conservative
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Matches 13; Conservative
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387
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SEQUENCE FROM N.A.
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SEQUENCE
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Q91710
ID Q91710
AC Q91710;
DT 01-JAN:
DT 01-JAN:
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097372
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01-JAN'1998 (TrEMBLrel. 05, Last sequence update)
01-JAN'2001 (TrEMBLrel. 17, Last annotation update)
01-JUN-2001 (FREMBLY).
Litomosoides sigmodontis.
Litomosoides sigmodontis.
Chararyota; Mrtaxoa; Nematoda; Chromadorea; Spirurida; Filarioidea; Onchorucidae; Litomosoides.
                                                                                                                                                                                                                                                                                                                                                                                                01-JAN-1998 (TrEMBLrel. 05, Created)
01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
CALRETICULIN (FRAGMENT).
Xonopus ladevis African clawed frog).
Eukaryota: Metazoa; Chordata; Cranlata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Trovem S., Zorzato F., Pozzan T.; "Identification of calreticulin isoforms in the central nervous
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Pred. No. 0.0018;
1; Mismatches 3; Indels
                                                                                                                                                              Query Match 77.1%; Score 74; DB 5; Length 403; Bust Local Similarity 82.4%; Pred. No. 0.0015; Matches 14; Conservative 1; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           40105 MW; 3E7DDAFA33B91DE1 CRC64;
                                                                                         16 POTENTIAL.
46833 MW; 21F38B0515487B6F CRC64;
                                                                                                                                                                                                                                                                                                                                                                  PRT; 343 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRINTS; PRO0626; CALRETICULIN.
PROKAM; PD001866; CALRETICULIN; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
PROSITE; PS00803; CALRETICULIN_1: 1.
PROSITE; PS00804; CALRETICULIN_2: 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 3.
PROSITE; PS00014; ER_TARGET; UNKNOWN_1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Biochem. J. 287:579-581(1992).
EMBL; X67598, CAA7867.1; -
InterPro; IPRO01580; Calreticulin.
Pfam: PF00262; calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDIJINE 93074997; PubMed :1445218;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 VIFNYKGKNVLINKDIRC 18
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Hest Local Similarity 77.8
Matches 14, Conservative
                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Xenopodinae; Xenopus.
NCBI_TaxID 8355;
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                                                                                                        403 AA;
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                                                                        Signal; Allergen.
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NON_TER
SEQUENCE
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                                                                                                          SEQUENCE
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018478
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              J. Mol. Evol. 49:729-735(1999).
EMBL, AB025323; BAA88476.1; -.
InterPro; IPR000886; ER_target.
InterPro; IPR001580; Calreticulin.
                    75.0%;
77.8%;
                                                                                                                                                                                                                               01-JUN-1998 (TrEMBLrel. 06, 01-JUN-1998 (TrEMBLrel. 06, 01-JUN-2001 (TrEMBLrel. 17,
                                                                                                                                                                                                                                                                                                                                                                                                                STRAIN-PHILIPPINE (MINDORO);
                                                                                                    99 VIFNYKGQNHLIKKDIPC 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   145 VIENYKGONHLIKKDIPC 162
                                                                                 1 VIFNYKGKNVLINKDIRC 18
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Matches 14; Conservative
                                                    Conservative
                                                                                                                                                                                                  PRELIMINARY;
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                  Query Match
Best Local Similarity
Matches 14; Conserv
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                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=6182;
                                                                                                                                                                                                                                                                                    CALRETICULIN.
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                                                                                                                                                                                                                                                                                                                                                    Schistosoma
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                                                                                                                                                                                                                   045034;
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Q9U5G0
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ID 04
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01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
01-JUN-2001 (FRAMENT).
RAL-1.
RAL-1.
Schistrosoma japonicum (Blood fluke).
Eukaryota; Metazoa; Platyhelminthes; Rhabditophora; Neodermata;
Trematoda; Digenea; Strigeidida; Schistosomatoidea; Schistosomatidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
CALMETICULIN PRECURSOR (FRAGMENT).
Xenopus laevis (African clawed frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
                                                                                                                                                                                 Ireves S., Zorzato F., Pozzan T.;
Identification of calreticulin isoforms in the central nervous
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 73; DB 13; Length 411; Pred. No. 0.0022;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Huggins M.C., Moloney N.A.;
Submitted (AUG-1993) to the EMBL/GenBank/DDBJ databases.
EMBL; MBOS24; AAA29917.1;
InterPro; IPR001580; Calreticulin.
Pfam; PPR00462; Calreticulin; IPRNTS; PR00526; Calreticulin; IPRNTS; PR00503; Calreticulin; IPRNTS; PR00503; Calreticulin; IPRNTS; PR00503; CALRETICULIN.
PROSTITE; PS00804; CALRETICULIN. 1; IPROSTITE; PS00804; CALRETICULIN. REPEAT; IPROSTITE; PS00014; ER_TARGET; UNKNOWN_I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                              CALRETICULIN.
891DA66E00EBBEFA CRC64;
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                                                                                                                                                                                                                           Biochem. J. 287:579-581(1992).
EMBL: X67597; CAA47866.1; -
InterPro; IPR000886; ER_target.
InterPro; IPR001580; Calreticulin.
Pfam: PF00262; Calreticulin: I.
PROSITE; PS00865; CALRETICULIN.
PROSITE; PS00803; CALRETICULIN.
PROSITE; PS00804; CALRETICULIN.2; I.
PROSITE; PS00804; CALRETICULIN.2; I.
PROSITE; PS00804; CALRETICULIN.2; I.
PROSITE; PS00804; CALRETICULIN.2; I.
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                                                                                                                                                                                                                                                                                                                                                                                                                                               POTENTIAL
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                                                                                                                                                                MEDLINE-93074997; PubMed-1445218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 48344 MW;
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77.8%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 77.8° Best Local Similarity 77.8° Matches 14; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                411
                                                                          Xenopodinae; Xenopus.
NCBI_TaxID=8355;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               411 AA;
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                                                                                                                                                  LISSUE-BRAIN;
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SEQUENCE
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Q26514
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Eukaryota; Metazoa; Platyhelminthes; Rhabditophora; Neodermata;
Trematoda; Digenea; Strigeidida; Schistosomatoidea; Schistosomatidae;
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                                                                              Gaps
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"Monophyly of lampreys and hagfishes supported by nuclear DNA-coded
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eptatretus burgeri (Inshore hagfish).
Eukaryota, Metazoa; Chordata; Craniata; Hyperotreti; Myxiniformes;
Myxinidae; Eptatretinae; Eptatretus.
                                                                           0;
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0
                    Length 350;
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Score 72; DB 5; Length sur-
Pred. No. 0.0027;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Scott J.C.;
Submitted (JAN-1998) to the EMBL/GenBank/DDBJ databases.
EMBL; AF044408; AAC00515.1; -1.
InterPro; IPR00886; ER_target.
InterPro; IPR01580; Calreticulin.
Pfam; PF00262; calreticulin; 1.
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01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
CALRETICULIN (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                             Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 75.0%; Score 72; DB 5; 77.8%; Pred. No. 0.003;
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PRODOM; PD001866; CALRETICULIN. 1.
PROSITE; PS00803; CALRETICULIN. 1; 1.
PROSITE; PS00804; CALRETICULIN. 2; 1.
PROSITE; PS00804; CALRETICULIN. REPEAT; 2.
PROSITE; PS00805; CALRETICULIN. REPEAT; 2.
PROSITE; PS00144; ER_TARGET; UNKNOWN 1.
SEQUENCE 396 AA, 45813 MM; C57334C6FB4
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Search completed: January 9, 2002, 15:03:29 Job time: 271 sec

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January 9, 2002, 15:12:15 ; Search time 25.18 Seconds (without alignments) 26.210 Million cell updates/sec
GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd.
                                                                                          OM protein - protein search, using sw model
                                                                                                                                        Run on:
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US-09-828-000-6 96 1 VIFNYKGKNVLINKDIRC 18 Title: Perfect score: Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

100059 seqs, 36664827 residues Searched:

100059 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

SwissProt_39:* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description	P52193 bos taurus	P14211 mus musculu	P18418 rattus norv		oryct	P42918 bos taurus	P29413 drosophila	Q06814 schistosoma	P11012 onchocerca	P27798 caenorhabdi	Q9std3 chlamydomon	_	-	beta vul	004153 arabidopsis	P13594 mus musculu	P13592 homo sapien	рошо	bos t		P13590 gallus gall						P36335 xenopus lae	Q58058 methanococc	Q9sp22 zea mays (m	-	004151 arabidopsis	P34208 schizosacch	O9pqn4 ureaplasma
SUMMARIES	ID	ij	CRTC_MOUSE	CRTC_RAT	CRTC_HUMAN	CRTC_RABIT	CRT2_BOVIN	CRTC_DROME	CRTC_SCHMA	RAL1_ONCVO	CRTC_CAEEL	CRTC_CHLRE	CRTC_DICDI	CRTC_EUGGR	CRTC_BETVU	CRT3_ARATH	NCA2_MOUSE	NCA2_HUMAN	NCA1_HUMAN	NCA1_BOVIN	NCA1_RAT	NCA1_CHICK	NCA1_MOUSE	CRTC_PRUAR	CRT2_ARATH	VDHA_CHICK	NCA1_XENLA	NCA2_XENLA	PGK_METJA	CRTC_MAIZE	CRTC_ORYSA	CRT1_ARATH	CHK1_SCHPO	RPOA_UREPA
	DB	-	Н	Н		-	-4	-	-		-	, -	-	-	, ,	Н	Н	Н	Н	-1		-	-	1	-	7	٦	7	7	7	Н	-		-1
	Length	400	416	416	417	418	421	406	393	388	395	420	424	401	416	424	725	761	848	853	828	1091	1115	421	424	463	1088	1092	417	420	424	425	496	327
æ	Query	100.0	100.0	100.0	100.0	100.0	100.0	82.3		68.8		63.5	61.5	55.2	55.2	54.2	53.1	53.1	53.1	53.1	53.1	53.1		20.0			9	49.0	45.8	S.	45.8	45.8	45.8	44.8
	Score	96	96	96	96	96	96	79	72	99	64	61	59	53	53	52	51	51	51	51	51	51	51	48	48	48	47	47	44	44	44	44	44	43
	Result No.	н	7	m	4	2	9	7	8	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	56	27	28	29	30	31	32	33

ricinus com saccharomyc treponema p sacchinobacil saccharomyc pyrococcus pyrococcus pyrococcus pyrococcus alnus gluti methanococc schistosoma momordica c				eostomi; Bovoidea;		Isobe T.;	HIGH AND												TIAL).	
P93508 P22209 O66106 Q57293 Q9v1163 Q9v128 O59521 P29050 P49034 P09383 P16094			(HACBP).	r-4		; :						Glycoprotein							R (POTENTIAL)	; h 400;
	T.S	00 AA.	e) EGULIN)	Chordata; Craniata; Vertebrata; Bute Cetartiodactyla; Ruminantia; Pecora; os.		TISSUE_BLAIN; MEDLINE-94183174; PubMed-8135753; Matsuoka K., Seta K., Yamakawa Y., Okuyama T., Shinoda "Covalent structure of bovine brain calreticulin.";	IM. THERE ARE BOTH	RETICULUM LÜMEN JULIN FAMILY.				Repeat; Glyco	TWAMPE DEPENDENTS	LIMALE NEFERIS.		3 X APPROXIMATE REPEATS. 2-1.	S-RICH.		GLCNAC). CRETION FROM ER	C009EEF1 CRC04; DB 1; Length 1.3e-07;
CRTC_RICCO KIN3_YEAST GIDB_TREPA AFUC_ACTPL YGM9_YEAST EF2_PYRHO EF2_PYRHO EF2_PYRHO SUSY_ALNGL Y037_METJA HPRT_SCHMA RIPI_MOMCH	ALIGNMENT	PRT; 400	01-007-1996 (Rel. 34, Created) 01-007-1996 (Rel. 34, Last sequence update) 01-007-1996 (Rel. 34, Last annotation updat CALRETICULIN, BRAIN ISOFORM 1 (CRP55) (CALR	Craniata; lactyla; Ru		753; 7a Y., Okuy 9 brain cal	NDS CALCIU	OPLASMIC RIE CALRETIC	oulin. st. 1.]; 1, 1,	CALRETICULIN_1; 1. CALRETICULIN_2; 1. CALRETICULIN_2; 1.	m-binding; N-DOMAIN.	C-DOMAIN.	1-1.	11-36 1-4.	3 X APPROX 2-1.	2-2. 2-3. ASP/GLU/LYS-RICH		N-LINKED (GLCNAC. PREVENT SECRETION	
			eated st se st ar	data; rtiod		-8135 nakav ovine	IN BI-BIN	ENI O TE	retic targe lin:	CULIN Culi	COLL	alciu							9	100.08; 100.08;
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MEDLINE 93013037; Pubmed 1398135;
Mazzarella R.A., Gold P., Cunningham M., Green M.;
"Determination of the sequence of an expressible cDNA clone encoding Especycalregulin by the use of a novel nested set method.";
Gene 120:217-225(1992).
  Gaps
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STRAIN BALB/C; TISSUE-Liver;
MEDIINE 90059955; Pubmed-2583110;
Smith M.J., Koch G.L.E.,
"Multiple zones in the sequence of calreticulin (CRP55, calregulin, HACHP), a major calcium binding ER/SR protein.";
EMBO J. 8:3581-3586(1989).
                                                                                                                                                                                                 Eukaryota; Matazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
NCBL_TaxID:10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Electrophoresis 15:735-745(1994).
-!- EUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW APPINITY CALCIUM-BINDING SITES.
-!- SUBUNIT: MONOMER (BY SIMILARITY).
-!- SUBCELLOLAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SUMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
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MEDLINE 95009907; PubMed 7523108;
Merrick B.A., Putterson R.M., Wichter L.L., He C., Selkirk J.K.;
"Separation and sequencing of familiar and novel murine proteins
using preparative two-dimensional gel electrophoresis.";
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01-JaN-1990 (Rel. 13, Last sequence update)
15-DEC-1998 (Rel. 137, Last annotation update)
CALRETICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP) (ERP60).
 Indels
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Proken; PRO01866; CALRETICULIN; 1.
PROSITE; PSO0014; ETTARGE; 1.
PROSITE; PSO0803; CALRETICULIN_1; 1.
PROSITE; PSO0805; CALRETICULIN_2; 1.
PROSITE; PSO0805; CALRETICULIN_2; 1.
ERGOPLHAMMIC reticulum; Calcium-binding; Repeat; Signal.
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InterPro; IPR001580; Calreticulin.
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Ptum; PF00262; calreticulin; 1.
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SWISS-2DPAGE; P14211; MOUSE.
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Conservative
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MEDLINE-93202172; PubMed-8453984;
Nakamura M., Moriya M., Baba T., Michikawa Y., Yamanobe T., Arai K.,
Okinaga S., Kobayashi T.,
"An endoplasmic reticulum protein, calreticulin, is transported into
the acrosome of rat sperm.";
Exp. Cell Res. 205:101-110(1993).
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
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01-MAR-1989 (Rel. 10, Created)
01-NOY-1990 (Rel. 16, Last sequence update)
01-NOY-197 (Rel. 35, Last annotation update)
CALRETICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP) (ERP60) (CALBP)
(CALCIUM-BINDING PROTEIN 3) (CABP3).
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MEDLINE-90370496; PubMed-2295661;
Murthy K.K., Banville D., Srikant C.B., Carrier F., Bell A.,
Holmes C., Patel Y.C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 96; DB 1; Length 416;
Pred. No. 1.4e-07;
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Blochim. Blophys. Acta 1158:339-344(1993).
-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM BINDING STITES.
-!- SUBGRILLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SUBGRILLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SIMILARITY: BELONGS TO THE CALREFICULIN FAMILY.
-!- CAUTION: WAS ORIGINALLY (REF. 2) THOUGHT TO BE D-BETA-
HYDROXYBUTYRATE DEHYDROGENASE.
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SEQUENCE OF 18-29.
SEQUENCE OF 18-29.
SEQUENCE-91054414; PubMed=2241926;
Treves S., de Mattei M., Lanfredi M., Villa A., Green N.M.,
Maclennan D.H., Meldolesi J., Pozzan T.;
Maclennan D.H., a candidate for a calsequestrin-like function in
"Calreticulin is a candidate for a calsequestrin-like function in
                                                                                                                                                                                                                                                                                                                                                                                                             Yokoi T., Nagayama S., Kajiwara R., Kawaguchi Y., Horiuchi R., Kamataki T.;
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"Calreticulin is present in the acrosome of spermatids of rat
Lone Y.C., Bailly A., Latruffe N.; Submitted (DEC-1988) to the EMBL/GenBank/DDBJ databases.
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PIR; S13045; S13045.
PIR; A49176; A49176.
PIR; A45036; S45036.
PIR; JH0819; JH0819.
InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
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McCauliffe D.P., Lux F.A., Lieu T.S., Sanz I., Hanke J., Newkirk M.M.,
Bachinski L.L., Itoh Y., Siciliano M.J., Reichlin M., Sontheimer R.D.,
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MEDLINE=92002034; PubMed=1911778;
MEDLINE=920020343; PubMed=1911778;
Rojiani M.V., Finlay B.B., Gray V., Dedhar S.;
In vitro interaction of a polypeptide homologous to human Ro/SS-A antigen (calreticulin) with a highly conserved amino acid sequence in the cytoplasmic domain of integrin alpha subunits.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=92129342; PubMed=1733953; McCaullife D.P., Yang Y.S., Wilson J., Sontheimer R.D., Capra J.D.; "The S'-flanking region of the human calreticulin gene shares homology with the human GRP78, GRP94, and protein disulfide isomerase
                                                                                                                                                                                                                                                                                                                                  Gaps
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01-AUG-1992 (Rel. 23, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
CALRETICULIN PRECURSOR (CREP5) (CALREGULIN) (HACBP) (ERP60) (52 KDA RIBONUCLEOPROTEIN AUTOANTIGEN RO/SS-A).
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Rokeach L.A., Haselby J.A., Meilof J.F., Smeenk R.J., Unnasch T.R., Greene B.M., Hoch S.O.;
"Characterization of the autoantigen calreticulin.";
J. Immunol. 147:3031-3039(1991).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo Sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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MEDLINE-90380058; PubMed-2400400;
Krause K.H., Simmerman H.K.B., Jones L.R., Campbell K.P.;
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Submitted (MAR-1997) to the EMBL/GenBank/DDBJ databases
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J. Clin. Invest. 85:1379-1391(1990).
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                                                                                                                                                                                                                                                                     Sequence similarity of calreticulin with a Ca2(+)-binding protein that co-purifies with an Ins(1,4,5)P3-sensitive Ca2+ store in HL-60
                                                                                                                                                                                                   "Microsequences of 145 proteins recorded in the two-dimensional gel protein database of normal human epidermal keratinocytes."; Electrophoresis 13:960-969(1992),
                                                                              Hochstrasser D.F., Frutiger S., Paquet N., Balroch A., Ravier F., Pasquall C., Sanchez J.-C., Tissot J.-D., Bjellqvist B., Vargas R. Appel R.D., Hughes G.J.;

Alman Ilver protein map: a reference database established by microssequencing and gel comparison.";

Electrophoresis 13:992-1001(1992).
                                                                                                                                                                                Rahmusken H.H., van Damme J., Puype M., Gesser B., Celis J.E.,
Vandekerckhove J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro; IPR001580; Calreticulin.
InterPro; IPR000866; ER_target.
Prim; PP00262; Calreticulin; 1.
PRIMTS; PR002626; Calreticulin; 1.
PROSITE; PS00014; ER_TRRGET; 1.
PROSITE; PS00804; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00806; CALRETICULIN_2; 1.
PROSITE; PS008065; CALRETICULIN_2; 1.
ROGOPIASMIC reticulum; Calcium-binding; Repeat; Signal.
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P-DOMAIN.
C-DOMAIN.
4 X APPROXIMATE REPEATS.
1-1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CALRETICULIN
                                                                                                                                                            TISSUE-Keratinocytes;
MEDLINE-93162043; Pubmed 1286667;
                                                                                                                                                                                                                                                     TISSUE Colon carcinoma;
MEDLINE 97295306; PubMed 9150948;
                                                                     MEDLINE-93162045; PubMed 1286669;
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PIR, A37047; A37047.
PIR, S11475; S11475.
PIR, A42330; A42330.
PIR, A46422; A46452.
ASVISS-2DPAGE; P27797; HUMAN.
Aurhus/Ghent-2DPAGE; 9401; IEF.
                             atochem. J. 270:545-548(1990)
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MEDLINE-91201375; PubMed-2016321;
Milner R.E., Baksh S., Shemanko C., Carpenter M.R., Smillie L.,
Vance J.E., Opas M., Michalak M.;
"Calreticulin, and not calsequestrin, is the major calcium binding
protein of smooth muscle sarcoplasmic reticulum and liver endoplasmic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
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MEDLINE-91054414; Pubmed-2241926;
MEDLINE-91054414; Pubmed-2241926;
Treves S., de Mattel M., Lanfredi M., Villa A., Green N.M.,
Maclennan D.H., Meldolesi J., Pozzan T.;
"Calreticulin is a candidate for a calsequestrin-like function in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ca2(+)-storage compartments (calciosomes) of liver and brain."; Biochem. J. 271:473-480(1990).
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TISSUE-FRAST-twitch skeletal muscle;
#MEDLINE-91282795; PubMed-2059224;
Fliegel L., Michalak M.;
"Fast-twitch and slow-twitch skeletal muscles express the same
                                                                                                                                                                                                                                                                                                                 ö
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01-OCT-1996 (Rel. 34, Last annotation update)
CALRETICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP) (ERP60).
                                                                                                                                                                                                                                                                           100.0%; Score 96; DB 1; Length 417; 100.0%; Pred. No. 1.4e-07;
                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                        PREVENT SECRETION FROM ER. MISSING (IN REF. 3).
BC37C3C0F1054FB2 CRC64;
1-2.
1-3.
1-4.
3 X APPROXIMATE REPEATS.
2-1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             isoform of calreticulin.";
Biochem. Biophys. Res. Commun. 177:979-984(1991).
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                                                                                                                                                             BY SIMILARITY.
                                                                                                                                                                                                                                                                                   100.0%; Pred. No.
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MEDLINE~92002038; PubMed≃1911780;
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                                                                                                                                                                                                                  48141 MW;
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417
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417 AA;
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Best Local Similarity
Matches 18; Conserv
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         15-JUL-1998 (Rel. 36, Last annotation update)
CALRETICULIN, BRAIN ISOFORM 2 PRECURSOR (CRP55) (CALREGULIN) (HACBP).
                                                                                                          Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                                           Biochim. Biophys. Acta 1202:70-76(1993).
-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM-BINDING SITES.
-!- SUBMIT: MONOMER (BY SIMILARITY).
-!- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                        Liu N., Fine R.E., Johnson R.J.; "Comparison of cDNAs from bovine brain coding for two isoforms of
                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N-LINKED (GLCNAC. ..) (POTENTIAL).
PREVENT SECRETION FROM ER.
0257E959F71528BC CRC64;
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Pred. No. 1.4e-07;
Mismatches 0; Indels
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PROSITE; PS00803; CALRETICULLI. 1.
PROSITE; PS00804; CALRETICULLIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 3.
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InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
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ProDom; PD001866; Calreticulin; 1.
                                                                                                                                                                                                                           TISSUE-Brain;
MEDLINE-93385184; PubMed-8373827;
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100.0%;
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Best Local Similarity 100.
Matches 18; Conservative
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Bovidae; Bovinae; Bos
                                                      Bos taurus (Bovine)
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                                                                                                                                Bovidae; Bovinae
NCBI_TaxID=9913;
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Guan S., Falick A.M., Williams D.E., Cashman J.R.; "Evidence for complex formation between rabbit lung flavin-containing monooxygenase and calreticulin.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                          Biochemistry 30:9892-9900(1991).
-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM-BINDING SITES.
-!- SUBUNIT: MONOMER (BY SIMILARITY).
-!- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
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BY SIMILARITY.
PREVENT SECRETION FROM ER.
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B6082B689DC763A6 CRC64;
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PROSTIE; PS000014; ER_TRETICULIN.

PROSTIE; PS000004; CALRETICULIN.

PROSTIE; PS000005; CALRETICULIN.

PROPERTY OF THE PROP
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P-DOMAIN.
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                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; J05138; AAA31188.1; -.
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PIR, C33208, C33208.
PIR, D33208, D33208.
PIR, E33208, E33208.
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PIR; S13046; S13046.
PIR; S13047; S13047.
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Matches 18; Conserv
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KACHAN BERGER S.E., ILI P.W., BOSAND. C.A., GOCGAYOF J.D.,

KACHAN BELGER G. K., KOGGES Y.-H.C., Blazel R.G., Champe M., Pfeiffer B.D.,

KAN BRANDON R.C., KOGGES Y.-H.C., Blazel R.G., Champe M., Pfeiffer B.D.,

KADLI J.F., AGBUSPON, BERMAN B.P., BANDARID D., BOLGARAV S.,

HOKKOVA D., BOCHON M.R., BOUCK J., BROASTCHOP, C. COTEC A., Chandra I.,

KADLI J.F., AGBUSPON, BERMAN B.P., BRANDARD, D., BOLGARAV S.,

HOKKOVA D., BOLCHEL, BOUNDS J., DOWNON, B.C., DUAN P.,

KANDON K.J., CRADICILER, DOWNOS M., DUGANT C.C., FORTER S., PLOSADON K.,

KANDON K.J., CRADICILER, DOWNOS M., DUGAN FOR B.C., DUNN P.,

KANDON K.J., CAUDICILE, DOWNOS M., DUGAN R.C., DUN P.,

RADUDIN K.J., EVANGILEY B., GOLTELI J. J., GOLDAT W.M., CLASSER K.J.,

KANDON K.J., CAUDICILI J. J., GOLDAT W.M., CLASSER K.J.,

KANDON K.J., CAUDICILI J. J., GOLDAT W.M., CLASSER K.J.,

KANDON K.J., CAUDICILI J. J., GOLDAT W.M., CLASSER K.J.,

JULII M., KAIUSH P., KAICHON G.J., WOLD K.J., HOUCK J.,

HARTIN D., HOUSTON K.A., HOWING T.J., WOLD K.J., MOSPIERI A.,

JULII M., KAIUSH P., KAICHON B., MULPHY L., MUZNY D.M., NORING K.,

JULII M., KAIUSH P., KAICHON F., LI J., J., LI Z., LIANG Y., LIA X.,

LUK K., MALTELI B., MUTCHON T., LOLL S., KRUP D., MOSPIERI A.,

MURICI S.M., MOYN, MUTCHON T., SUNDER K., SMICH T.,

SULFAUS K., MOSON K.A., MOSPIER E., WAND D.M., WOND C.,

WANDON D.K., WOND M., SULDON K., SUNDER E., WAND S.M.,

SHAND D., POLL WALTENON K., SUNDER E., WAND S., YON O.,

SHAND D., MOSPIER E., WON G., ZON O.,

AND SHAND S., WON S., WOND S., ZON O., ZON O.,

WHITHOM S., WOND S., WOND S., ZON O., ZON O.,

WALLI MARTEL B., WON S., ROND S., ZON O., ZON O.,

WALLI MARTEL B., WON S., WOND S., ZON O., ZON O.,

WALLI MARTEL B., WON S., WOND S., ZON O., ZON O.,

WALLI WAS SERVER S., ZON O., WOND S., ZON O., ZON O.,

WALLI WAS SERVER S., ZON O., WOND S., ZON O., ZON O.,

WAND
                                                                                                                     Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
Prorygota; Meoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroidea; Drosophilidae; Drosophila.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              *A human Ro/SS-A autoantigen is the homologue of calreticulin and is highly homologous with onchocercal RAL-1 antigen and an aplysia 'memory molecule''.

1. Cilin. Invest. 86:332-335(1990).

1. FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LAW APPLINITY CALCIUM BINDING SITES.

1. SUMCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.

1. SUMCELLULAR LOCATION: ENDOPLASMIC RETICULUM FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           McCauliffe D.P., Zappi E., Lieu T.S., Michalak M., Sontheimer R.D.,
                                                                                                                                                                                                                                                                                ಥ
                                                                                                                                                                                                                                                       Smith M.J.;
"Nucleotide sequence of a Drosophila melanogaster gene encoding
calreticulin homologue.";
       C1-AR-1993 (Rel. 25, Created)
01-CCT-1993 (Rel. 27, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
CALRETICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP).
                                                                                                      Drosophila melanogaster (Fruit fly).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE 90307981; PubMed 2365822;
                                                                                                                                                                                                                                       MEDIINE 93208374; PubMed 1296819;
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                                                                                                                                                                                                                                                                                                                 Seq. 3:247-250(1992).
                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                   SHOUENCE FROM N.A.
                                                                                                                                                                               NCBI_TaxID 7227;
                                                                                                                                                                                                                                                                                                                                                                         STRAIN BERKELEY;
                                                                                      CRC OR CG9429.
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01-FEB-1996 (Rel. 33, Last sequence update)
01-NOV-1997 (Rel. 35, Last annotation update)
01-NOV-1997 (Rel. 35, Last annotation update)
CALRETICULIN PRECURSOR (SM4 PROTEIN)
SCHISTOSOMM manson1 (Blood fluke)
Eukaryota; Metacoa; Platyhelminthes; Turbellarian Platyhelminths;
Rhabditophora; Eulecithophora; Revertospermata; Mediofusata;
Neodermata; Trematoda; Digenea; Strigeidida; Schistosomatoldea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      calreticulin.";
Mol. Biochem. Parasitol. 62:313-315(1993).

-i- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND
LOW AFFINITY CALCIUM-BINDING SITES.

-i- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE-94187805; PubMed-8139623;
Khalife J., Pierce R.J., Godin C., Capron A.;
"Cloning and sequencing of the gene encoding Schistosoma mansoni
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Capron A.; "Cloning of the gene encoding a Schistosoma mansoni antigen homologous to human Ro/SS-A autoantigen."; Mol. Biochem. Parasitol. 57:193-202(1993).
                                                                                                                                                                                                              EMBL, AB00368; ARE54416.1; --
PIR; A37158; A37158

PIPBase; EBGN005585; Crc.
InterPro; IPR000886; ER_target.
InterPro; IPR000886; ER_target.
Pfam; PR00262; calreticulin; 1.
PROMOGS; calreticulin; 1.
PROSITE; PS00014; ER_TARGET; 1.
PROSITE; PS00803; CALRETICULIN_2: 1.
PROSITE; PS00803; CALRETICULIN_2: 1.
PROSITE; PS00805; CALRETICULIN_2: 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 406;
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V -> L (IN REF. 3).
65D72C69D0BEC427 CRC64;
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Pred. No. 5.6e-05;
2; Mismatches 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CALRETICULIN.
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STRAIN-PUERTO RICAN;
MEDLINE-93165070; Pubmed-8433712;
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NCBI_TaxID-6183;
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83.3%;
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|146 VIFSYKGKNHLISKDIRC 163
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                                                                                                                                                                                               EMBL; X64461; CAA45791.1;
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Best Local Similarity 83.3
Matches 15; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   406 AA;
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SEQUENCE FROM N.A.
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|144 VIFHYKDRNHMIKKDIRC 161
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295
267
281
295
388
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388 AA;
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ses 12; Conserv
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SEQUENCE FROM N.A.
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01-FEB-1994
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SEQUENCE
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REPEAT
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                                                                                                                                                                                                                                                                                                              PROSITE; PS00014; ER_TARGET; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 1.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal; Glycoprotein.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rokeach L.A., Zimmerman P.A., Unnasch T.R.; "Epitopes of the Onchocerca volvulus RALI antigen, a member of the Calteticulin family of proteins, recognized by sera from patients with onchoceriasis":
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Nematoda; Chromadorea; Spirurida; Filarioidea; Onchocercidae; Onchocerca.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N-LINKED (GLCNAC. . .) (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3 X 11 AA APPROXIMATE REPEATS 2-1.
                                                                                                                                                                                                                                                                                                                                                                                                                                             4 X 12 AA APPROXIMATE REPEATS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 393;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3; Indels
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PREVENT SECRETION FROM ER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -> D (IN REF. 2).
45F59857C21940D2 CRC64;
 SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MV -> IL (IN REF. 2). MISSING (IN REF. 2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-JUL-1989 (Rel. 11, Created)
01-NOV-1995 (Rel. 32, Last sequence update)
01-CT-1996 (Rel. 34, Last annotation update)
RAL-1 PROTEIN PRECURSOR (41 KDA LARVAL ANTIGEN).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 72; DB 1; Pred. No. 0.00065;
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                                                                                                                                                                                                                                                                                                                                                                                                                              CALRETICULIN.
                                                                                                                                                                                                                                                                                                                                                                                                          POTENTIAL.
                                                                                                                                                                                                                         Interpro; IPR001580; Calreticulin.
InterPro; IPR000866; ER_target.
Pfam; PF00262; Calreticulin; 1.
PRINTS: PR00656; Calreticulin; 1.
ProDom; PD001866; Calreticulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A. MEDLINE-94341871; PubMed-7520419;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Infect. Immun. 62:3696-3704(1994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ₩.
                                                                                                                                                                       EMBL; M93097; AAA29854.1; -.
EMBL; L24159; AAA19024.1; -.
HSSP; P00268; 4RXN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                75.0%;
77.8%;
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Best Local Similarity 77.8
Matches 14; Conservative
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254
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P11012;
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Gaps
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Rhabditidae; Peloderinae; Caenorhabditis.
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"A C. elegans gene encodes a protein homologous to mammalian
"A C. elegans gene encodes DNA Seq. 2:235-240(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 388;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
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9537F298A2D31CD6 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RAL-1 PROTEIN.
4 X APPROXIMATE REPEATS.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ARG/LYS-RICH (BASIC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 66; DB 1;
Pred. No. 0.0054;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (Rel. 23, Created)
(Rel. 23, Last sequence update)
(Rel. 28, Last annotation update)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRINTS: PRO0626; CALRETICULIN.
PRODOM; PD001866; Calreticulin; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
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                                                                                                                                                                                                                                                                                                                                                                                 EMBL; M20565; AA59056.1; -.
PIR; A32507; A32507
InterPro; PR001580; Calreticulin.
Pfam; PF00262; calreticulin; 1.
PRINTS; PR00626; CALRETICULIN.
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1-2.
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66.7%;
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5-DEC-1998
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SEQUENCE
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                                                                                                                                                This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the Kuropean Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@lsb-sib.ch).
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Eukaryota; Viridiplantae; Chlorophyta; Chlorophyceae; Volvocales;
FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ;;
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"Cloning and characterization of a cDNA encoding Chlamydomonas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        66.7%; Score 64; DB 1; Length 395; 66.7%; Pred. No. 0.011;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 reinhurdtii calreticulin.";
Submitted (CCT-1997) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRINTS, PRODES, CALRETICULIN.
PRODOM, PD001866; CALRETICULIN.
PROSTIE; PS00014; ER_TARGET; 1.
PROSTIE; PS00803; CALRETICULIN_1; 1.
PROSTIE; PS00804; CALRETICULIN_2; 1.
PROSTIE; PS00805; CALRETICULIN_2; 1.
PROSTIE; PS00805; CALRETICULIN_ERPEAT; 3.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal.
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BY SIMILARITY.
PHEVENT SECRETION FROM ER.
35CA7D2EC1D56B03 CRC64;
                              LOW AFFINITY CALCIUM-BINDING SITES.
SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C-DOMAIN.
4 X APPROXIMATE REPEATS.
1-1.
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                                                                                            -1 - SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          098TD3;
20-AUG-2001 (Rel. 40, Created)
20-AUG-2001 (Rel. 40, Last sequence update)
CALUS-2001 (Rel. 40, Last annotation update)
CALRETICULIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           420 AA.
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CALRETICULIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N-DOMAIN.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pfum; PF00262; calreticulin; 1.
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                                                                                                                                                                                                                                                                                                                                                                                             EMBL; X59589; CAA42159.1; -.
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ws 12; Conservative
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395 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
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Matches
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CRTC_CHLRE
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-:- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFILITY CALCIUM-BINDING SITES (BY SIMILARITY).
-:- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN (BY SIMILARITY).
-:- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CALRETICULIN.
PREVENT SECRETION FROM ER (POTENTIAL).
DD3BA3AFFBF61C9B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Muclier-Taubenberger A., Gerisch G.; Submitted (DEC-1997) to the EMBL/GenBank/DDBJ databases.
-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW APFINITY CALCIUM-BINDING SITES (BY SIMILARITY).
-!- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SIMILARITY: BELONGS TO THE CALREFICULIN FAMILY.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 420;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 1.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Dictyostellum discoldeum (Slime mold).
Eukaryota; Mycetozoa; Dictyostellida; Dictyostellum.
NCBI_TaxID:44689;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 61; DB 1;
Pred. No. 0.034;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (Rel. 37, Last sequence update) (Rel. 37, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        424 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Interpro; IPR001580; Calrettculin.
Interpro; IPR000886; ER_target.
Pfam, PP00262; Calrettculin, 1.
PRINTS; PR00626; Calrettculin, 1.
ProDom; PD001866; Calrettculin; 1.
PROSITE; PS00004; ER_TARGET; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DiccyUb; Du00042; -.
InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER, target.
Pfam; PF00262; calreticulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (Rel. 37, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; AJ000765; CAB54526.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          420 AA; 47327 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            63.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; U36937; AAB87719.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              149 VILTYKGKNYLIKKDIK 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 70.6'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 VIFNYKGKNVLINKDIR 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CALRETICULIN PRECURSOR.
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POTENTIAL

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CARBOHYD
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                                                               SEQUENCE
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SIGNAL
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CRTC_BETVU
                      CHAIN
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                                         SITE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
Navazzio L., Baldan B., Martin W., Mariani P.;
Evidence for conservation of a calcium homeostat component:
purlication characterization and cloning of calreticulin from Euglena
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM-BINDING SITES (BY SIMILARITY).
SUBCELLULAR LOCATION: ENDOPLASMIC REJICULUM LUMEN (BY SIMILARITY).
SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                         PREVENT SECRETION FROM ER (POTENTIAL). BAF273694FB6FC37 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ;
                                                                                                                                                                4 X 12 AA APPROXIMATE REPEATS
                                                                                                                                                                                                                                                                      X 11 AA APPROXIMATE REPEATS
                                                                                            Endoplasmic reliculum; Calcium-binding; Repeat; Signal.

SIGNAL

SIGNAL

1 19 POTENTIAL.

CALRETICULIN.

DOMAIN 20 424 CALRETICULIN.

CALRETT CLIN.

REPEAT 191 257 4 4 12 AA APPROXIMATE REPEATS

REPEAT 211 222 1-1.

REPEAT 217 238 1-3.

REPEAT 246 257 1-4.

DOMAIN 260 270 298 3 X 11 AA APPROXIMATE REPEATS

REPEAT 260 270 2-1.

REPEAT 267 298 3 X 11 AA APPROXIMATE REPEATS

REPEAT 260 270 2-1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               1; Length 424;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gracilis.";
Submitted (DEC-1996) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; FALSE_NEG.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Euglena gracilis.
Eukaryota; Euglenozoa; Euglenida; Euglenales; Euglena.
NCBI_TaxID=3039;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (Rel. 40, Last sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 1;
0.07;
                                                                                                                                                                                                                                                                                                                                                       BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                 PD001866; Calreticulin; 1.
PS00804; CALRETICULIN.2; 1.
PS00805; CALRETICULIN.REPEAT; 1.
PS00014; ER_TARGET; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 59;
Pred. No. (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRINTS; PRO0626; CALRETICULIN.
PRODOM; PRO01866; CALTETICULIN; 1.
PROSITE; PS00014; ER_TARGET; 1.
PROSITE; PS00803; CALRETICULIN_1: 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; Y09816; CAA70945.1; -.
InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
Pfam; PF00262; calreticulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20-AUG-2001 (Rel. 40, Created)
CALRETICULIN
                                                                                                                                                                                                                                                                                                                                                                                                 ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                               61.5%;
75.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 VIFNYKGKNVLINKDI 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CALRETICULIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                            424 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity tes 12; Conserv
PR00626;
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20-AUG-2001
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Q9ZNY3;
                                       PROSITE;
PROSITE;
PROSITE;
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PRINTS;
                                                                                                                                                                                                                                                                                                                                   REPEAT
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-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND
LOW AFFILITY CALCIUM-BINDING SITES (BY SIMILARITY).
-!- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN (BY SIMILARITY).
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROSITE, PS0014; ER_TARGET; 1.
PROSITE; PS001014; ER_TARGET: 1.
PROSITE; PS00804; CALRETICULIN.2; 1.
PROSITE; PS00805; CALRETICULIN.2; 1.
PROSITE; PS00805; CALRETICULIN.2; 1.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal; Glycoprotein.
                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
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N-LINKED (GLCNAC. . .) (POTENTIAL).
PREVENT SECRETION FROM ER (POTENTIAL).
565FEC3489F77CA7 CRC64;
                           CALRETICULIN.
PREVENT SECRETION FROM ER (POTENTIAL).
056B074C16292674 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Beta vulgaris (Sugar beet).
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ;
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                                                                                                                                       Length 401
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Caryophyllidae; Caryophyllales; Chenopodiaceae; Beta
NCBI_TaxID=3555;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Nucleotide sequence from sugar beet calreticulin.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
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Pred. No. 0.58;
                                                                                                                                         DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              20-AUG-2001 (Rel. 40, Last sequence update) 20-AUG-2001 (Rel. 40, Last annotation update) CALRETICULIN PRECURSOR.
                                                                                                                                                             0.56;
                                                                                                                                                                                                                                                                                                                                                                                                      416 AA
                                                                                                                                                                                          Mismatches
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                                                                                                                                           Score 53;
Pred. No.
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InterPro; IPR000886; ER_target.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; AJ002057; CAA05161.1; -. Mendel; 32549; Betvu;1166;32549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        416 P
48136 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                20-AUG-2001 (Rel. 40, Created)
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PRINTS; PR00626; CALRETICULIN.
                                                                            ¥.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A. STRAIN=VV-D/ZR5; TISSUE=Leaf;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   55.2%;
58.8%;
                                                                                                                                         55.2%;
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                                                                                                                                                                                                                                      2 IFNYKGKNVLINKDIRC 18
                                                                                                                                                                                        Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                      STANDARD;
18
401
401
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57
157
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Best Local Similarity
Matches 10; Conserv
                                                                                                                                           Query Match
Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Arabidopsis thallana (Mouse-ear cress),
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnollophyta; eudlcotyledons; core eudlcots; Rosidae;
euroalds II; Erassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Shinn P., Brooks S., Buehler E., Chao Q., Johnson-Hopson C., Khan S., Kin C., Altafi H., Bel Q., Chin C., Chlou J., Chol E., Conn L., Conway A., Gonzales A., Hansen N., Howing B., Koo T., Lam B., Lee J., Lenz C., Li J., Liu A., Liu K., Liu S., Mukharsky N., Nguyen M., Palm C., Pham P., Sakano H., Schwartz J., Southwick A., Thaveri A., Ecker J.R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mondel; 1650; Arath; 1166;1650.
Mondel; 1680; Mondel; ER, target.
PRINTE; PRO0186; Calreticulin; 1.
PROSITE; PS00803; CALRETICULIN, 1.
PROSITE; PS00804; CALRETICULIN, 2; 1.
PROSITE; PS00805; CALRETICULIN, 2; 1.
PROSITE; PS00805; CALRETICULIN, 2; 1.
PROSITE; PS00805; CALRETICULIN, ERPEAT; FALSE_NEG.
MONGEL CALRETICULIN, ERPEAT; MONGEL CALRETICULIN, ERPEAT; FALSE_NEG.
MONGEL CALRETICULIN, ERPEAT; FALSE_NEG.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nelson D.E., Glaunsinger B., Bohnert H.J.;
Abbudaht accumulation of the calcium-binding molecular chaperone
calreticulin in specific floral tissues of Arabidopsis thaliana.";
Plant Physiol. 114:29-37(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -> S (IN REF, 2).
650E0AE8342F0B97 CRC64;
                        CKT3_ARATH STANDARD; PRT; 424 AA. 004153; Q9SJE7; 20-AUG-2001 (Rel. 40, Creuted) 20-AUG-2001 (Rel. 40, Last sequence update) 20-AUG-2001 (Rel. 40, Last annotation update) CALRETICULIN 3 PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE:97303616; PubMed:9159940;
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54.2%; Score 52; DB 1; Length 424; larity 50.0%; Pred. No. 0.84; Conservative 5; Mismatches 4; Indels

Query Match Bust Local Similarity Matchus 9; Conserv

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Qy 1 VIFNYKGKNVLINKDIRC 18
|| :|:|:| | ||::|
| Db 155 VIVSYQGQNYPIKKDLQC 172
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Search completed: January 9, 2002, 15:12:15 Job time: 657 sec

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OM protein - prot. Run on: Title: Perfect score: Sequence: Scoring table:	Copyright (c) 1993 - 2000 Compugen Ltd. OM protein - protein search, using sw model Run on: January 9, 2002, 15:02:03; Search time 43.73 Seconds (without alignments) 31.355 Million cell updates/sec Perfect score: 96 Sequence: 1 VIFNYKGKNVLINKDIRC 18 Scoring table: BLOSUM62 Gapop 10.0, Gapext 0.5
Searched:	219241 seqs, 76174552 residues

length: 0 length: 2000000000 sed Minimum DB :

219241

Total number of hits satisfying chosen parameters:

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

pir_68:*
1: pirl:*.
2: pir2:*.
3: pir3:* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

% Query Result

Description	calreticulin, brai	calreticulin precu	calreticulin homol	calreticulin precu	calreticulin clon	calreticulin precu	calreticulin autoa	41K larval antigen	calreticulin precu	calreticulin - bee		neural cell adhesi		neural cell adhesi	cell	neural cell adhesi	neural cell adhesi	calreticulin - bar	calreticulin - bar	glyceraldehyde-3-p									
ΔI	S43376	S06763	JH0819	A37047	A34154	836799	JH0795	A56637	S71343	S29130	829129	A48573	A32507	S25851	T14554	IJMSNG	IJHUNG	IJBONC	IJRTNC	IJCHNL	IJMSNL	A53101	JE0099	JE0100	IJXLNL	JN0635	T05703	T05705	T44939
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Match Length	400	416	416	417	418	421	405	406	419	384	411	393	336	.395	416	725	761	853	828	1091	1115	464	725	725	1088	1092	412	415	501
Match	100.0	100.0	100.0	100.0	100.0	0	89.6	82.3	81.2	76.0	76.0	75.0	68.8	66.7	55.2	53.1	53.1	53.1	53.1	53.1	53.1	20.0	49.0	49.0	49.0	49.0	46.9	46.9	46.9
Score	96	96	96	96	96	96	98	79	78	73	73	72	99	64	53	51	51	51	51	51	51	48	47	47	47	47	45	45	45
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phosphoglycerate k calreticulin precu calreticulin (Crt1	protein kinase chk hypothetical prote activin type I rec	iron (iii) abc tra DNA-directed RNA p calreticulin - cas	probable protein k probable LRR recep hypothetical prote	probable pheromone replication protei	carbonate dehydrat
A64380 S58170 C96605	S33597 G71141 PC4260	C75077 B82918 T10172	S23580 B84594 F75010	B56272 A60998 H71260	T49025
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417 421 425	496 103 247	257 327 415	435 767 103	121	284
45.8 45.8 45.8	45.8 44.8 44.8	44.8 44.8	44.8 44.8 43.8	43.8 83.8	43.8
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30 32	33 35 35	36 38 38	3 4 4 9 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	4 4 4 4 4 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4	45

ALIGNMENTS

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A; Residues: 1-400 < MAT>
A; Experimental source: brain
B; Liu, N.; Fine, R.E.; Johnson, R.J.
Biochim. Biophys. Acta 1202, 70-76, 1993
A; Title: Comparison of CDNAs from bovine brain coding for two isoforms of calreticuli
A; Reference number: S36799; MUID: 93385184
A; Reference number: S36799; MUID: 93385184
A; Residues: acid sequence not shown
A; Residues: 45-63, E', 65-83 < LIU>
A; Residues: 45-63, E', 65-83 < LIU>
A; Residues: 45-63, E', 65-83 < LIU>
C; Superfamily: calreticulin
C; Superfamily: calreticulin
C; Reywords: calcum binding: glycoprotein
C; Reywords: calcum binding: glycoprotein
F; 397-400/Region: endoplasmic reticulum retention signal
F; 120-146/Disulfide bonds: #status experimental
F; 162/Binding site: carbohydrate (Asn) (covalent) #status experimental
calrettculin, brain isoform 1 - bovine
C;Species: Bos primigenius taurus (cattle)
C;Species: Bos primigenius taurus (cattle)
C;Date: 20-oct-1994 #sequence_revision 23-Mar-1995 #text_change 07-May-1999
C;Accession: S43376; S36801
R;Matsuoka, K.; Seta, K.; Yamakawa, Y.; Okuyama, T.; Shinoda, T.; Isobe, T.
Biochem. J. 298, 435-442, 1994
A;Title: Covalent structure of bovine brain calreticulin.
A;Reference number: S43376; MUID:94183174
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Gaps ö 100.0%; Score 96; DB 2; Length 400; 100.0%; Pred. No. 1.5e-07; tive 0; Mismatches 0; Indels Indels Conservative Query Match Best Local Similarity Matches 18; Conserv

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129 VIFNYKGKNVLINKDIRC 146 1 VIFNYKGKNVLINKDIRC 18 Dρ οy

RESULT 2
S06763
calreticulin precursor - mouse
N;Alternate names: 55K calcium-binding reticuloplasmin; calregulin
C;Species: Mus musculus (house mouse)
C;Species: Mus musculus (house mouse)
C;Date: 10 Sep-1999 #sequence_revision 10 Sep-1999 #text_change 10 Sep-1999
C;Accession: S06763; JC1444; PC1233; A57498
E;Smith, M.J.; Koch, G.L.E.
EMBO J. 8, 3581-3586, 1989

2

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A; Molecule type: mRNA
A; Readdues: YR, 270-358, AAG' <LON>
A; Readdues: YR, 270-358, AAG' <LON>
A; Readdues: Ry, 270-358, AAG' <LON>
A; Note: the authors designated the protein as D-beta-hydroxybutyrate dehydrogenase
B; Yokoi, T.; Nagayama, S.; Kajiwara, R.; Kawaguchi, Y.; Horiuchi, R.; Kamataki, T.
Blochim. Biophys. Acta 1158, 339-344, 1993
A; Title: Identification of protein disulfide isomerase and calreticulin as autoimmune
A; Reference number: S39371; MUID:94072621
A; Residues: 18-32 <NAK2>
A; Experimental source: testis, strain Sprague-Dawley
E; Soennichsen, B.; Fuellekrug, J.; van Nguyen, P.; Diekmann, W.; Robinson, D.G.; Mies
submitted to the FMBL Data Library, May 1994
A; Description: Retention and retrieval: both mechanisms cooperate to maintain calreti
A; Reference number: $45036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Molecule type: profein
A; Mealdues: 18-36 < VMattei,
A; Realdues: 18-36 < VMattei,
B; Carreves, S.; de Mattei,
B; Carreves, S.; de Mattei,
B; Carreves, S.; de Mattei,
B; Carreves,
B; Mulp:91054414
A; Reference number: S13045; Mulp:91054414
A; Reference number: S13045; Mulp:91054414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Molecule type: protein
A; Residues: 18-23, 'x',25-32 <YOK>
R; Van, P.N.; Peter, F.; Soeling, H.D.
B; Van, P.N.; Peter, E.; Soeling, H.D.
A; Title: Four intracisternal calcium-binding glycoproteins from rat liver microsomes itive calcium sequestering rat liver vesicles.
A; Reference number: A34473; MUID:90008920
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calreticulin precursor - human

N;Alternate names: 52K ribonucleoprotein autoantigen Ro/SS-A; 60K integrin-binding p:
N;Alternate names: 52K ribonucleoprotein autoantigen Ro/SS-A; 60K integrin-binding p:
C;Species: Homo sapiens (man)
C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 18-Feb-2000
C;Accession: A42330; A37047; A46452; A28812; PH1525; A40346; S11475; T45075
S;McCauliffe, D.P.; Yang, Y.S.; Wilson, J.; Sonthelmer, R.D.; Capra, J.D.
J. Biol. Chem. 267, 2557-2562, 1992
A;Title: The S'-fianking region of the human calreticulin gene shares homology with the A;Reference number: A42330; MUID:92129342
                                                                                                                                                                                               A;Status: preliminary
A;Molecule type: mkNA
A;Residues: 1-416 <SOE>
A;Cross-references: EMBL:X79327; NID:q488840; PIDN:CAA55890.1; PID:g488841
R;Lone, Y.C.; Ballly, A.; Latruffe, N.
submitted to the EMBL Data Library, December 1988
A;Reference number: S04867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
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C'Superfamily: calreticulin
C'Superfamily: calreticulin
C'Superfamily: calreticulin
F:1-17/Domain: signal sequence #status predicted <SIG>
F:18-416/Peroduct: calreticulin #status experimental <MAT>
F:204-212/Region: nuclear location signal
F:313-416/Region: endoplasmic reticulum retention signal
F:344/Binding site: carbohydrate (Asn) (covalent) #status predicted
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100.0%; Pred. No. 1.5e-07;
Live 0; Mismatches 0;
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Matches 18; Conserv
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                                                                                                                                                                          A; Accession: S45036
                                                                                                                                                                                                                                                                                                                                                                                                 A; Accession: S04867
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A; Molecule type: mRNA
A; Residues: 1-416 <MAZ>
A; Crown-references: GB:M92988; NID:g193084; PIDN:AAA37569.1; PID:g193085
A; Musidues: Pc1233
A; Musidues: Pc1241
A; Musidues: AZ7498
A; Till: Cromic number: A57498; MUID:95332280
A; Till: Crown-reference number: A57498; MUID:95332280
A; Accession: A57498
A; Molecule type: protein
A; Molecule type: protein
A; Molecule type: protein
C; Superfamily: calreticulin
C; Superfamily: calculin #status predicted <SIG>
F; 1-17/Domain: signal sequence #status predicted <AGS
F; 18-416/Product: calregulin #status experimental <AMT>
F; 113-416/Product: calregulin #status experimental cand
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Title: Determination of the sequence of an expressible cDNA clone encoding ERp60/calre
A;Reference number: JC1444; MUID:93013037
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                       A;Cross-references: EMBL:X14926; NID:950567; PIDN:CAA33053.1; PID:950568 R;Muzzarellu, R.A.; Gold, P.; Cunningham, M.; Green, M. Green, M.
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100.0%; Pred. No. 1.5e-07;
tive 0; Mismatches 0;
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Matches 18; Conserv
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Gaps

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Additional precursor, skeletal muscle - rabbit
C; Species: Oryctolagus cuniculus (domestic rabbit)
C; Accession: A34154; S13047
R; Fliegel, L.; Burns, K.; MacLennan, D.H.; Reithmeier, R.A.F.; Michalak, M.
J; Bicliegel, L.; Burns, C, 1522-21528, 1989
J; Flitle: Molecular cloning of the high affinity calcium-binding protein (calreticulin A; Reference number: A34154; MUID: 90094320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Cross-references: GB:J05138; NID:g164858; PIDN:AAA31188.1; PID:g164859
R;Treves, S.; de Mattei, M.; Lanfredi, M.; Villa, A.; Green, N.M.; MacLennan, D.H.; M Biochem. J. 271, 473-480, 1990
A;Title: Calreticulin is a candidate for a calsequestrin-like function in Ca(2+)-stor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  brain coding for two isoforms of calreticuli
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A; Title: Comparison of cDNAs from bovine brain coding for two isoforms of ca A; Reference number: S36799; MUID:93385184
A; Reference number: S36799
A; Residues: 1-421 < LIU>A; Residues: 1-421 < LIU>A; Residues: GB:L13462; NID:9348693; PIDN:AAC37307.1; PID:9348694
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C; Keywords: calcium binding; glycoprotein
C; Keywords: calcium binding; glycoprotein
F;1-34/Domain: signal sequence #status predicted <NAT>
F;3-421/Product: calreticulin, brain isoform 2 #status predicted <MAT>
F;418-421/Region: endoplaamic reticulum retention signal
F;141-167/Disulfide bonds: #status predicted
F;183/Binding site: carbohydrate (Asn) (covalent) #status predicted
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                                                         Length 417;
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                                                                                                                                 Indels
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C;Keywords: skeletal muscle
F;1-17/Domain: signal sequence #status predicted <SIG>
F;41-418/Region: endoplasmic reticulum retention signal
                                                     Score 96; DB 1; I
Pred. No. 1.5e-07;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 96; DB 1; 100.0%; Pred. No. 1.5e-07;
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A;Accession: S13047
A;Molecule type: protein
A;Residues: 19-32 <TRE>
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                                                     100.0%; Sc
100.0%; Pr
tive 0;
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                                                                                                                                                                                                      1 VIFNYKGKNVLINKDIRC 18
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Best Local Similarity 100.
Matches 18; Conservative
                                                                                                                                 Conservative
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                                                     Query Match
Best Local Similarity
Matches 18; Conserv
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A;Molecule type: mRNA
A;Residues: 1-418 <FLL>
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B; Rojiani, M.V.; Finlay, B.B.; Gray, V.; Dedhar, S.
Biochemistry 30, 9859-9866, 1991
A; Title: In vitro interaction of a polypeptide homologous to human Ro/SS-A antigen (calra, Rocession: A40346; MUID:92002034
A; Racerone number: A40346; MUID:92002034
A; Racerone number: 18-34, R. < ROJ>
B; Rrause, K.H.; Simmerman, H.K.B.; Jones, L.R.; Campbell, K.P.
B; Rrause, R.H.; Simmerman, H.K.B.; Jones, L.R.; Campbell, K.P.
B; Reference number: S11475; MUID:90380058
A; Title: Sequence similarity of calreticulin with a Ca(2+)-binding protein that co-purif A; Reference number: S11475; MUID:90380058
A; Molecule type: protein
A; Residues: 18-32 × CRRA
B; Riamerdin, J; MCCready, P; Stilwagen, S.; Ramirez, M.; Carrano, A.
Submitted to the EMBL Data Library, November 1996
A; Rescription: Characterization by genomic sequence analysis of a gene-rich 111 kb regic
A; Residues: 1-417 <WC2>
A; Note: sequence extracted from NCBI backbone (NCBIN:78537, NCBIP:78536)
B; McCauliffe, Luux, F.A.; Liau, T.S.; Sanz, I.; Hanke, J.; Newkirk, M.M.; Bachinski, J.C.lin. Invest. 85, 1379-1391, 1990
A; Title: Molecular cloning, expression, and chromosome 19 localization of a human Ro/SS-ARCession: A37047; MUD:90237213
A; Accession: A37047
A; Molecule type: mRNA
A; Residues: 1-417 <MCA.
A; Molecule type: mRNA
A; Residues: GB:M32294; NID:9337486; PIDN:AAA36582.1; PID:9337487
A; Note: the authors translated the codon GTA for residue 349 as Tyr
B; Rokeach, L.A.; Hasablby, J.A.; Meilof, J.F.; Smeenk, R.J.; Unnasch, T.R.; Greene, B.M.;
J. Immunol. 147, 3031-3039, 1991
A; Title: Characterization of the autoantigen calreticulin.
A; Reference number: A46452; MUD:9203129
A; Accession: A46452; MUD:9203129
A; Molecule type: mRNA
A; Residues: 1-417 <ROKA
A; Note: sequence extracted from NCBI backbone (NCBIN:60749, NCBIP:60750)
B; Liau, T.S.; Newkirk, M.M.; Capra, J.D.; Sontheimer, R.D.
J. Clin. Invest. 82, 96-101, 1988
A; Reference number: A28812; MUD:88273610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A,Title: The calcium-binding protein calreticulin is a major constituent of lytic granul
A,Reference number: PH1525, MUID:93115648
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A;Residues: 1-417 <LAM>
A;Residues: 1-417 <LAM>
A;Cross-references: EMBL:AD000092; PIDN:AAB51176.1
A;Experimental source: cell line 5HL2-B; fibroblast
C;Comment: Autoantibodies specific for this protein are found in Sjogren's syndrome and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Map position: 19p13.3-19p13.2
A;Introns: 31/1; 65/1; 133/1; 164/3; 234/3; 272/3; 320/3; 351/3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Dupuis, M.; Schaerer, E.; Krause, K.H.; Tschopp, J.
Exp. Med. 177, 1-7, 1993
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A;Status: preliminary; translated from GB/EMBL/DDBJ
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A;Cross-references: GDB:125179; OMIM:109091
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Molecule type: protein
A; Residues: 18-41 <LIE>
A; Note: 18-Ala was also found
R; Dupuis, M.; Schaerer " "
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Gaps

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A; Note: sequence extracted from NCBI backbone (NCBIN:128274, NCBIP:128275)
R; McCauliffe, D.P.; Zappi, E.; Lieu, T.S.; Michalak, M.; Sontheimer, R.D.; Capra, J.D. J. Clin. Invest. 86, 332-335, 1990
A; Title: A human Ro/SS-A autoantiqen is the homologue of calreticulin and is highly h A; Reference number: A37158; MUID:90307981
A; Reference number: A37158
A; Accession: A37158
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C; Species: Xenopus laevis (African clawed frog)
C; Species: 30-Sep-1993 #sext_change 13-Aug-1999
C; Accession: $29130; 710.068
R; Treves, S.; Zorzato, F.; Pozzan, T.
Byochem. J. 287, 559-581, 1992
A; Title: Identification of calreticulin isoforms in the central nervous system. A; Reference number: $29129; MUID:93074997
A; Accession: $29130
A; Accession: $29130
A; Residues: 1-384 <TRE>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A) Status: nucleic acid sequence not shown
A) Molecule type: mRNA
A) Residues: 1-419
A) FOR Sessions: 1-419
A) FOR Sessions: 1-419
B) FOR SESSION: BABIL: D78589; NID: 91514956; PIDN: BAA11425.1; PID: 91514957
C) Superfamily: calreticulin
C) Keywords: calcium binding; endoplasmic reticulum
F):-18/Domain: signal sequence #status predicted <SIG>F: 19-419/Product: calreticulin #status predicted <ART>
F: 19-419/Product: calreticulin #status redicted <ART>
F: 205-213/Region: nuclear location signal
F: 415-418/Region: endoplasmic reticulum retention signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C;Species: Rana rugosa (Korean frog)
C;Date: 29-Jan-1998 #sequence_revision 13-Feb-1998 #text_change 20-Jun-2000
C;Accession: S7144
R;Yamamoto, S.; Nakamura, M.
R;Yamamoto, S.; Nakamura, M.
FEBS Lett. 387, 27-32, 1996
A;Title: Calnexin: its molecular cloning and expression in the liver of the A;Reforence number: S71342; MUID:96234004
A;Accession: S71343
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                                                                                                                                                                                      C.Keywords: callium binding; endoplasmic reticulum F;1-17/Domain: signal sequence #status predicted <SIG> F;403-406/Region: endoplasmic reticulum retention signal
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Pred. No. 7.3e-05;
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88.2%;
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83.3%;
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Best Local Similarity 83.3
Matches 15; Conservative
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Best Local Similarity 88.2
Matches 15; Conservative
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A, Introns: 65/1; 222/3
C; Superfamily: calreticulin
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C;Species: Aplysia californica (California sea hare)
C;Species: Japp:1999 #sequence_rovision 10-Sep:1999 #text_change 10-Sep:1999
C;Accessian: JH0795; B31409; E60977
Nutron 9; 1013-1024; 1992
A;Title: Long-ferm sensitization training in aplysia leads to an increase in calreticuli
A;Reference number: JH0795; MUID:93098937
A;Accession: JH0795; MUID:93098937
A;Restidues: 1-405 KKEN>
A;Cross-references: GB:S51299; NID:9362053; PIDN:AAB24569.1; PID:9262054
A;Restidues: 1-405 KKEN>
A;References: GB:S51299; NID:9362053; PIDN:AAB24569.1; PID:9262054
A;References: GB:S51299; NID:9362050; A;Rendel, E.R.; Sweatt, J.D.
A;Title: Sequencing of proteins from two-dimensional gels by using in situ digestion and tion in Aplysia.
A;Reference number: A94207; MUID:88320566
A;Revission: B31409
A;Restidues: 'X',17-28', 'X',30-31 KKE2>
A;Restidues: 'X',17-28', 'X',30-31 KKE2>
A;Restidues: 'X',17-28', 'X',30-31 KKE2>
A;Restidues: 'X',17-28', 'X',30-31 KKE2>
A;Reference number: A60977; MUID:89276264
A;Arccassion: Kefarence number: A60977; MUID:89276264
A;Arccassion: Kefarence number: A60977; MUID:89276264
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                              Length 421;
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                                                                                Indels
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A)Molecule type: protein
A;Molecule type: protein
A;Molecule: Y,17-28, X',30-31 <SME>
C;Superfamily: calreticulin
C;Keywords: calcium binding; endoplasmic reticulum
C;Keywords: calcium binding; endoplasmic reticulum
F;15-500min: signal sequence #status predicted <SIG>
F;16-405/Product: calreticulin #status experimental <MAT>
F;402-405/Region: endoplasmic reticulum retention signal
                           Score 96; DB 2; I
Pred. No. 1.5e-07;
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Pred. No. 5.7e-06;
2; Mismatches 1;
  100.0%; Scor.
100.0%; Pred. No. 1...
0; Mismatches
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83.38;
                                                                                                                                                                150 VIFNYKGKNVLINKDIRC 167
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Best Local Similarity 83.3
Matches 15; Conservative
                                                    Best Local Similarity 100.
Matches 18; Conservative
                              Query Match
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A; Cross-references: EMBL:X67598

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75.0%;
77.8%;
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                                                                                     Conservative
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C;Superfamily: calreticulin
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Matches 12; Conserv
                                 Query Match
Best Local Similarity
Matches 14; Conserv
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Map position: 5
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A48573
calreticuln autoantigen homolog precursor - fluke (Schistosoma mansoni)
C; Species: Schistosoma mansoni
C; Species: Schistosoma mansoni
C; Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999
C; Accession: A48573
R; Khalife, J; Trottein, F.; Schacht, A.M.; Godin, C.; Pierce, R.J.; Capron, A. Mol. Biochem. Parasitol. 57, 193-202, 1993
A; Title: Cloning of the gene encoding a Schistosoma mansoni antigen homologous to human A; Reference number: A48573; MUD:93165070
A; Accession: A48573
A; Status: preliminary
A; Molecule type: mRNA
A; Residues: 1-393 < KHAA
A; Residues: 1-393 < KHAA
A; Note: sequence extracted from NCBI backbone (NCBIN:125085, NCBIP:125086)
C; Superfamily: calreticulin
F; 1-16/Domain: signal sequence #status predicted <SIG>F; 390-393/Region: endoplasmic reticulum retention signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 11
S29129
calreticulin precursor (clone 3) - African clawed frog (fragment)
C;Species: Xenopus laevis (African clawed frog)
C;Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 13-Aug-1999
C;Accession: 529129
R;Treves, S.; Zorzato, F.; Pozzan, T.
Biochem, J. 287, 579-581, 1992
A;Title: Identification of calreticulin isoforms in the central nervous system. A;Reference number: S29129; MUID:93074997
A;Accession: 529129
A;Accession: 529129; MUID:93074997
A;Residues: 1-411 CTRE>
A;Cross-references: EMBL:X67597; NID:964608; PIDN:CAA47866.1; PID:964609
C;Superfamily: calreticulin
C;Keywords: 91ycoprotein
F;13-12/Domain: signal sequence (fragment) #status predicted <SIG>F;13-411/Product: calreticulin #status predicted <AMAP-F;1408-411/Region: endoplasmic reticulum retention signal
F;339/Binding site: carbohydrate (Asn) (covalent) #status predicted
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A; Accession: T01068
A; Status: translated from GB/EMBL/DDBJ
A; Status: translated from GB/EMBL/DDBJ
A; Status: 1.339, "XTGR' <TRW>
A; Residues: 1.339, "XTGR' <TRW>
A; Cross-references: EMBL: X67598; NID:g64610; PIDN:CAA47867.1; PID:g64611
A; Experimental source: CNS
C; Superfamily: calreticulin
C; Keywords: glycoprotein
C; Keywords: glycoprotein
F; 381-384/Region: endoplasmic reticulum retention signal
F; 316/Binding site: carbohydrate (Asn) (covalent) #status predicted
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Pred. No. 0.00066;
1; Mismatches 3; Indels
                                                                                                                                                                                                                                                                                                                       Score 73; DB 2; Length 384;
Pred. No. 0.00062;
                                                                                                                                                                                                                                                                                                                                                                            3; Indels
                                                                                                                                                                                                                                                                                                                                                                            1; Mismatches
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77.8%;
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77.8%;
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|118 VIFQYKKKNLQINKDIRC 135
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                                                                                                                                                                                                                                                                                                                                                                            14; Conservative
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Best Local Similarity
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C; Species: Onchocerca volvulus
C; Species: 21-May-1990 #text_change 12-Apr-1995
C; Date: 21-May-1990 #sequence_revision 21-May-1990 #text_change 12-Apr-1995
C; Accession: A32507; Asalin, M.Y.; Soboslay, P.T.; Erttmann, K.D.; Greene, B.M.
K; Unnasch, T.R.; Gallin, M.Y.; Soboslay, P.T.; Erttmann, K.D.; Greene, B.M.
J. Clin. Invest. 82, 262-269, 1988
A;Title: Isolation and characterization of expression cDNA clones encoding antigens o
A;Reference number: A92769; MUID:88273584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA Seq. 2, 235-240, 1992
A;Title: A C. elegans gene encodes a protein homologous to mammalian calreticulin.
A;Reference number: $25851; MUID:92329978
A;Accession: $25851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Molecule type: DNA
A;Residues: 1-395 cBAD-
A;Cross-references: EMBL:AF125963; PIDN:AAD14746.1; GSPDB:GN00023; CESP:Y38A10A.5
A;Experimental source: strain Bristol N2; clone Y38A10A
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C;Species: Caenorhabditis elegans
C;Date: 06-Jan-1994 #sequence_revision 10-Nov-1995 #text_change 05-Nov-1999
C;Accession: S25851; T3996
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A;Molecule type: DNA
A;Residues: 1-395 <SMI>
A;Cross-references: EMBL:X59589; NID:g6693; PIDN:CAA42159.1; PID:g6694
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 336,
                                                                                                                                                                                                                                                                                                                                    41K larval antigen - nematode (Onchocerca volvulus) (fragment)
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submitted to the EMBL Data Library, February 1999
A; Description: The sequence of C. elegans cosmid Y38A10A.
A; Reference number: 221453
A; Accession: T33996
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Score 72; DB 1; Ler
Pred. No. 0.00091;
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Pred. No. 0.0069;
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66.7%;
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1 VIFNYKGKNVLINKDIRC 18

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RESULT 15
T14554
C.Jatrituanin - beet
C.Species: Beta vulgaris (beet)
C.Species: Bota vulgaris (beet)
C.Species: 20-Sep-1999 #sequence_revision 20-Sep-1999 #text_change 20-Jun-2000
C.Spacesion: T14554
K.Yiereck, R.
Hubmitted to the EMBL Data Library, October 1997
K.Yiereck, R.
Hubmitted to the EMBL Data Library, October 1997
A.Scession: T14554
A.Status: preliminary; translated from GB/EMBL/DDBJ
A.Scession: T14554
A.Status: 1445 vules
A.Status: 1446 vules
A.Scatus - references: EMBL.A.002057
A.Scress-references: EMBL.A.002057
C.Superfamily: calreticulin
C.Superfamily: calreticulin
C.Superfamily: calreticulin
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                     141 VILNYKGENKLIKKEITC 158
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Search completed: January 9, 2002, 15:02:03 Job time: 190 sec

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Run on:

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99hxe0 peudomonas
000557 homo sapien
09dbb3 mus musculu
09d131 streptococc
000867 nectria hae
09d1aw pimpla hypo
09law0 mycoplasma
069017 ictalurid hypo
07336 brachydanio
09d916 brachydanio
09d916 brachydanio
09d616 brachydanio
026791 trypanosoma
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026794 trypanosoma
                          040567 nicotiana t
O9sxw3 lithosparmu
09d373 mus musculu
09d966 mus musculu
073946 pyrococcus
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O57577 cynops pyrr
O57576 cynops pyrr
         022502 brassica na
Q9st29 solanum mel
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A. MEDIANGE SEQUENCE FROM N.A. MEDIANE-20063780; PubMed-10594174; MEDIANE-20063780; VALOBA S., Hoshiyama D., Katoh K., Suga H., Miyata T.; "Monophyly of lampreys and hagfishes supported by nuclear DNA-coded
                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Hyperoartia;
Petromyzontiformes; Petromyzontidae; Lampetra.
NCBI_TaxID=7753;
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SEQUENCE 318 AA; 36997 MW; C88102EA1CAC1506 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                 Last sequence update)
Last annotation update)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL, AB025328; BA88481.1; --
InterPro; IPR001886; ER_target.
InterPro; IPR001880; Calreticulin.
Pfan; PF00262; Calreticulin; PR00528; Calreticulin; PR0050m; PD001866; Calreticulin; I.
PROSITE; PS00804; CALRETICULIN_2; I.
PROSITE; PS00804; CALRETICULIN_2; I.
PROSITE; PS00804; CALRETICULIN_2; I.
PROSITE; PS0014; ER_TARGET; UNKNOWN_1.
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028949
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J. Mol. Evol. 49:729-735(1999).
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Lampetra reissneri.
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Matches 26; Conserv
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 RESULT
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Q9u6s0 strongyloce.
Q26268 aplysia cal
Q16893 amblyomma a
Q9u916 drosophila
O18478 litomosoide
O97372 dirofilaria
Q9884 rana rugosa
Q91711 xenopus lae
Q9pucl brachydanio
O76961 necator ame
Q26514 schistosoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q90590 eptatretus
Q40040 hordeum vul
Q40041 hordeum vul
Q41799 zea mays (m
Q43712 zea mays (m
                                                                                (without alignments)
50.536 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                      ; Search time 78.15 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Description
         GenCore version 4.5
Copyright (c) 1993 - 2000 Compugen Ltd
                                                                                                                                                                                                          Total number of hits satisfying chosen parameters:
                                                                                                                                   1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
                                                                                                                                                                                       473505 seqs, 146272329 residues
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Maximum Match 100%
Listing first 45 summaries
                                                                      January 9, 2002, 15:03:28
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Q26268
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Gapop 10.0 , Gapext 0.5
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sp_organelle:*
sp_phage:*
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sp_rodent:*
sp_virus:*
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Match Length DB
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Maximum DB
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Result

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92.7%;
92.6%;
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                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 92.68
Matches 25; Conservative
                                        24; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
TISSUE=SALIVARY GLANDS;
                                                                                                                                                                                                                                                  Amblyomma americanum.
                      Best Local Similarity
Matches 24; Conserv
                                                                                                                                                                                                                         CALRETICULIN.
                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q90916;
Q90916;
                                                                                                                                                        016893
                                                                                                                                RESULT
Q16893
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                                                                                                                                                               SEQUENCE FROM N.A.

A Susan J.M., Just M.L., Lennarz W.J.;

Susan J.M., Just M.L., Lennarz W.J.;

Cloning and Characterization of Alphap Integrin and Calreticulin in Embryos of the Sea Urchin.;

Embryos of the Sea Urchin.;

Usumitted (AUG-1999) to the EMBL/GenBank/DDBJ databases.

EMBL; AF17915; AAD55725.1;

InterPro; 1PR000886; ER_target.

NR InterPro; 1PR001580; Calreticulin.

PRINTS; PR00526; Calreticulin; 1.

PRINTS; PR00526; Calreticulin; 1.

PRODON; PR0017E; PS00804; CALRETICULIN. 1.

PROSITE; PS00804; CALRETICULIN. 2.

PROSITE; PS00804; CALRETICULIN. 2.

PROSITE; PS00804; ER_TARGET; UNKNOWN_1.
                                                                                      Strongylocentrotus purpuratus (Purple sea urchin).
Eukuryota; Metazoa; Echinodermata; Eleutherozoa; Echinozoa;
Echlundea; Eucchinoidea; Echinacea; Echinoida; Strongylocentrotidae;
Strongylocentrotus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Aplysta californica (California sea hare).
Eukaryota; Metazoa; Mollusca; Gastropoda; Opisthobranchia; Anaspidea;
Aplystidae; Aplysta.
NCBI_TaxID-6500;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
MEDLINE 93998937; PubMed 1463604;
Kennedy T.E., Kuhl D., Barzilai A., Sweatt J.D., Kandel E.R.;
Konnedy T.E., Kuhl D., Barzilai A., Sweatt J.D., Kandel E.R.;
"Long-term sensitization training in Aplysia leads to an increase in calreticulin, a major presynaptic calcium-binding protein.";
Neuron 9:1013-1024(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 421;
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PRIMTS; PR00656; CALRETICULIN.
PROSITE; PS00803; CALRETICULIN.
PROSITE; PS00804; CALRETICULIN.1; 1.
PROSITE; PS00805; CALRETICULIN.2; 1.
PROSITE; PS00905; CALRETICULIN.REPRAT; 3.
PROSITE; PS00014; RELABETTI 3.
SUQUENÇE 405 AA; 46738 MW; 14CAAZ01840D1D69 CRC64;
                                                                                                                                                                                                                                                                                                                                                                              421 CALRETICULIN.
48822 MW; 172C664F59F41F93 CRC64;
                     01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
CALRETICULIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 94.0%; Score 142; DB 5; Le
Best Local Similarity 92.6%; Pred. No. 3.5e-12;
Matches 25; Conservative 1; Mismatches 1;
421 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           405 AA
                                                                                                                                                                                                                                                                                                                                                                 POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 136 CCPGTKKVHVIFNYKGKNLLIKKDIRC 162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
 PRT;
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InterPro; IPR000886; ER_target.
InterPro; IPR001580; Calreticulin.
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PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                          431 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CALRETICULIN
                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
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026268;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "A secreted calreticulin protein in Ixodid tick (Amblyomma americanum)
                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Jaworski D.C., Simmen F.A., Lamoreaux W.J., Coons L.B., Muller M.T., Needham G.R.;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota, Metazoa, Arthropoda, Chelicerata, Arachnida, Acari,
Parasitiformes, Ixodida, Ixodidae, Amblyomma.
NCBI_TaxID 6943;
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SEQUENCE FROM N.A.
TISSUB-SALIVARY GLANDS;
Fain-Thornton J.M., Jaworski D.C., Needham G.R.;
Submitted (NOV-1998) to the EMBL/GenBank/DDBJ databases.
REMBL: U07708; AAC79094.1;
Interpro; IPR000886; ER_target.
Interpro; IPR000886; ER_target.
Refam: PF00262; calreticulin; 1.
RPTMTS; PR00626; Calreticulin; 1.
RPTMTS; PR00626; Calreticulin; 1.
RPTMTS; PS00803; CALRETICULIN.; 1.
RPTMTS; PS00803; CALRETICULIN.; 1.
RPTMTS; PS00803; CALRETICULIN.; 1.
RPTMTS; PS0080403; CALRETICULIN.; 1.
RPTMTS; PS0080404; CALRETICULIN. REPEAT; 3.
RPTMTS; PS0080404; CALRETICULIN. REPEAT;
RPTMTS; PS0080405; CALRETICULIN. REPEAT;
RPTMTS; PS0080405; CALRETICULIN. REPEAT;
RPTMTS; PS0080405; CALRETICULIN. REPEAT;
RPTMTS; PS0080405; CALRETICULIN. REPEAT;
RPTMTS; PR00805; CALRETICULIN. 
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                                          Score 141; DB 5; Length 405;
Pred. No. 4.6e-12;
                                                                                                                                     1; Indels
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Submitted (MAR-1994) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-NOV-1996 (TrEMBLrel. 01, Created)
01-JAN-1999 (TrEMBLrel. 09, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
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Last annotation update)
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Pred. No. 6.5e-12;
93.4%; Scor.
88.9%; Pred. No. 4..
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Drosophila melanogaster (Fruit fly).
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                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                          1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   J. Insect Physiol. 41:369-375(1995)
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01-MAY-1999 (TrEMBLrel. 01-JUN-2001 (TrEMBLrel. CALRETICULIN PRECURSOR.
                            01-MAY-1999 (TrEMBLrel.
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SIGNAL
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                               Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroidea; Drosophilidae; Drosophila.
NCBI_TAXID-7227;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             018478; (TrEMBLE) 05, Created) 01-JAN-1998 (TrEMBLE) 05, Created) 01-JAN-1998 (TrEMBLE) 05, Last sequence update) 01-JUN-2001 (TrEMBLE) 17, Last annotation update) RAL-1 PROTEIN (FRAGMENT). Litomosoides sigmodontis. Eukaryota; Metazoa; Nematoda; Chromadorea; Spirurida; Filarioidea; Onchocercidae; Litomosoides.
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Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 406;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 5; Length 375;
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Submitted (SEP-1997) to the EMBL/GenBank/DDBJ databases.
EMBL, AJ001621; CAA04047.1; -.
Interpro; IRR001580; Calreticulin.
Pfam; PF00262; calreticulin. 1.
Propost: PR00626; CALRETICULIN.
PROSTIE; PS00803; CALRETICULIN. 1.
PROSTIE; PS00804; CALRETICULIN. 2; 1.
PROSTIE; PS00805; CALRETICULIN. 2; 1.
                                                                                                                                                                                                 Dodo K., Sakoyama Y., Gamo S.;
"Drosophila melanogaster calreticulin for mRNA.";
Submitted (JAN-1997) to the EMBL/GenBank/DDBJ databases.
EMBL; AB000718; BAA85379.1; -.
                                                                                                                                                                                                                                                                                                                                                InterPro; IPR001580; Caleticulin.
InterPro; IPR001580; Caleticulin.
InterPro; IPR001866; ER_target.
InterPro; IPR001866; ER_target.
InterPro; IPR001866; Calreticulin; I.
PROSITE; PS00803; CALRETICULIN.
IPROSITE; PS00804; CALRETICULIN.2; I.
PROSITE; PS00805; CALRETICULIN.2; I.
PROSITE; PS00805; CALRETICULIN.REPEAT; 3.
PROSITE; PS00144; ER_TARGET; UNKNOWN I.
SEQUENCE 406 AA; 46809 MW; 68BA49A6B8ICC427 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                88.7%; Score 134; DB 5; L
88.9%; Pred. No. 4.6e-11;
iive 2; Mismatches 1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          375 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity 88.9
Matches 24; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
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                                                                                                                                              SEQUENCE FROM N.A.
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                                                                                                                                                                              STRAIN-OREGON-R;
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SEQUENCE
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097372
ID 097372
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018478
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ACC DE PRESENTA DE
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Gaps
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SEQUENCE FROM N.A.
MEDLINE-99094497; PubMed=9879888;
TSUJi N., Morales T.H., Ozols V.V., Carmody A.B., Chandrashekar R.;
"Molecular characterization of a calcium-binding protein from the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Calnexin: its molecular cloning and expression in the liver of the
                                                                                                                         Eukaryota; Metazoa; Nematoda; Chromadorea; Spirurida; Filarioidea;
Onchocercidae; Dirofilaria.
NCBI_TaxID=6287;
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Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Amphibia; Batrachia; Anura; Neobatrachia; Ranoidea; Ranidae; Rana.
NCBI_TaxID=8410;
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EMBL; D78589; EAA11425.1; "...
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18 POTENTIAL..
387 CALRETICULIN.
44941 MW; E7741BF6AAFA5885 CRC64;
10, Created).
10, Last sequence update)
17, Last annotation update)
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Last annotation update)
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Pred. No. 3.1e-10;
                                                                                                                                                                                                                                                                                                                                filarial parasite Dirofilaria immitis.";
MO1. Biochem. Parasitol. 97:69-79(1998).
EMBL; AF052978; AAD03405.1; -.
INTERPO. IPROUJS80; Calreticulin.
Pfam; PF00262; Calreticulin. 1.
PRINTS; PR00626; CALRETICULIN.
PRODOM; PD001866; Calreticulin; 1.
PROSITE; PS00804; CALRETICULIN.1; 1.
PROSITE; PS00804; CALRETICULIN.2; 1.
PROSITE; PS00805; CALRETICULIN.2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             419 AA
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PRODOM; PD001866; CALRETICULIN.
PROSTIE; PS00803; CALRETICULIN.1; 1.
PROSTIE; PS00804; CALRETICULIN.2; 1.
PROSTIE; PS00805; CALRETICULIN.REPEAT; 3.
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InterPro; IPR001580; Calreticulin.
Pfam; PF00262; calreticulin; 1.
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SEQUENCE FROM N.A.

MEDLINE=96234004; PubMed=8654561;
Yamamoto S., Nakamura M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ch 84.8%;

1 Similarity 81.5%;

22; Conservative
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01-FEB.1997 (TrEMBLrel. 02, 01-FEB.1997 (TrEMBLrel. 02, 01-JUN-2001 (TrEMBLrel. 17,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         frog, Rana rugosa.";
FEBS Lett. 387:27-32(1996).
                                                                                                      Dirofilaria immitis.
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Best Local Similarity
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Treves S., Zorzato F., Pozzan T.; "Identification of calreticulin isoforms in the central nervous system.";
                                                                                                                                                                                                                                                                                                                                                                                                  411 AA;
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Best Local Similarity
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NON_TER
SIGNAL
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01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
01-JUN-2010 (FRAGMENT)
Xenopus laevis (African clawed frog).
Xenopus laevis (African clawed frog).
Rukuryota, Mctazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoldea; Pipidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Xenopus luevis (African clawed frog).
Eukaryota; Motazos; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Butrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
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                                                                                           Length 419;
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PROSITE; PS00014; ER_TARGET; UNKNOWN_1.
SEQUENCE 419 AA; 48658 MW; 2C857036769673BF CRC64;
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01-JAN-1998 (TrEMBLrel. 05, Created)
01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
CALRETICULIN PRECURSOR (FRAGMENT).
                                                                                       82.8%; Score 125; DB 13;
88.5%; Pred. No. 8.9e-10;
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                                                                                                                                                                                                                                                                                                                               343 AA
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                                                                                                                                 1; Mismatches
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PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      109 CGPPTKKVHVIFQYKKKNLQINKDIRC 135
                                                                                                                                                                                                  1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
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                                                                                                                                                                         1 CGPGTKKVHVIFNYKGKNVLINKDIR 26
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InterPro; IPR001580; Calreticulin.
Pfam; PF00262; Calreticulin; 1.
PRINTS; PR00626; CALRETICULIN.
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MEDLINE 93074997; PubMed 1445218;
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                                                                                  Query Match
Best Local Similarity 88.59
Matches 23; Conservative
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SEQUENCE
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091710
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091711
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Sukaryota: Metzoca; Chordeta; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei; Ostariophysi;
Cypriniformes; Cyprinidae; Rasborinae; Danio.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rubinstein A.L., Lee D., Luo R., Henion P.D., Halpern M.E.;
Genes Dependent on Zebrafish cyclops Function Identified by AFLP
Differential Gene Expression Screen.";
Genesis 0:0-0(1999).
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PRINTS; PRO0626; CALRETICULIN.
PROSITE; PRO0803; CALRETICULIN.
PROSITE; PSO0803; CALRETICULIN.
PROSITE; PSO0804; CALRETICULIN.2; 1.
PROSITE; PSO0805; CALRETICULIN.2; 1.
PROSITE; PSO0014; ER.TARGET; UNKNOWN.1.
SEQUENCE 417 AA; 48723 MW; 2000C58400469986 CRC64;
                                                                                                                                                                                                                                                                                                                                              CALRETICULIN.
891DA66E00EBBEFA CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 120; DB 13;
Pred. No. 4.5e-09;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 115; DB 13;
Pred. No. 2.3e-08;
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                                                                                         Prem; PP00262; calreticulin; PRINTS; PR00626; Calreticulin; PRODOM; PD001866; Calreticulin; PROSITE; PS00803; Calreticulin; 1. PROSITE; PS00804; Calreticulin_2; 1. PROSITE; PS00805; Calreticulin_REPEAT; 2. PROSITE; PS00014; ER_TARGET; UNKNOWN_1.
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Biochem. J. 287:579-581(1992).
MBL; X67597; CAA47866.1; -
InterPro; IPR000886; ER_target.
InterPro; IPR001580; CalretLculin.
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InterPro, IPR000886; ER_target.
InterPro; IPR001580; Calreticulin.
                                                                                                                                                                                                                                                                                                                                                                     48344 MW;
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Query Match
Best Local Similarity
Matches 19; Conserv
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                                                                                                                                                                                                                             CALRETICULIN.
                                                                                                                                                                                                                                                                                 Schistosoma
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045034;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Schistosoma japonicum (Blood fluke).
Eukaryota: Metazoa; Platyhelminthes; Rhabditophora; Neodermata;
Trematoda; Digenea; Strigeidida; Schistosomatoidea; Schistosomatidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                     Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Strongylida;
Ancylostomatoidea; Ancylostomatidae; Bunostominae; Necator.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        1;
                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 72.5%; Score 109.5; DB 5; Length 403; Best Local Similarity 81.5%; Pred. No. 1.4e-07; Matches 22; Conservative 1; Mismatches 3; Indels 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Huggins M.C., Moloney N.A.;
Submitted (AUG-1993) to the EMBL/GenBank/DDBJ databases.
EMBL; M80524; AAA29917.1;
InterPro; IPR001866; ER_target.
InterPro; IPR001580; Calreticulin.
Pfam; PP00262; calreticulin.
Probom; PR00066; Calreticulin.
Probom; PR001866; Calreticulin.
PROSITE; PS000803; CALRETICULIN_1.
PROSITE; PS000805; CALRETICULIN_2.
PROSITE; PS000805; CALRETICULIN_2.
PROSITE; PS000805; CALRETICULIN_2.
NON_TER
NON_TER
SEQUENCE 350 AA; 40385 MW; 30FAB4E8BB685DIC CRC64;
                                                                                                                                                      SEQUENCE FROM N.A.

Pritchard D.I., Brown A., McElroy P., Loukas A., Girdwood Beritchard D.I., Brown A., McElroy P., Loukas A., Girdwood Berry C., Fullkrug R., Beck E.;

"Calreticulin is a hookworm allergen.";

Submitted (JUN-1998) to the EMBL/GenBank/DDBJ databases.

EMBL; AJOG6790; CAAAO254-11;

InterPro: IPR0001880; EL Larget.

InterPro: IPR001580; Calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                      21F38B0515487B6F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
CALRETICULIN (FRAGMENT).
                                     Last sequence update)
Last annotation update)
403 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              350 AA
                                                                                                                                                                                                                                                             PERNYS: PRO0262; calreticulin; 1.
PRINYS: PRO0626; CALRETICULIN.
PROSTIE: PS00804; CALRETICULIN_1; 1.
PROSTIE: PS00804; CALRETICULIN_2; 1.
PROSTIE: PS00804; CALRETICULIN_2; 1.
PROSTIE: PS00805; CALRETICULIN_2; 1.
PROSTIE: PS0004; ER_TARGET; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                          POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               134 CGP-TKKVHDIFSYKGKNHLIKKDIRC 159
                          Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
PRT;
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                                                                                                                                                                                                                                                                                                                                                                                      403 AA; 46833 MW;
                       01-NOV-1998 (TrEMBLrel. 08,
01-NOV-1998 (TrEMBLrel. 08,
01-UDN-2001 (TrEMBLrel. 17,
CALRETICULIN PRECURSOR.
PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
                                                                                         Necator americanus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                            Signal; Allergen.
                                                                                                                                 NCBI_TaxID=51031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=6182;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRAIN-CHINESE;
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                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                          SIGNAL
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Q26514
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Eukaryota; Metazoa; Platyhelminthes; Rhabditophora; Neodermata;
Trematoda; Digenea; Strigeidida; Schistosomatoidea; Schistosomatidae;
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                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Kuraku S., Hoshiyama D., Katoh K., Suga H., Miyata T.;
"Monophyly of lampreys and hagfishes supported by nuclear DNA-coded
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CALRETICULIN (FRAGMENT).

Pettarretus burgeri (Inshore hagfish).

Eukaryota; Metazoa; Chordata; Craniata; Hyperotret1; Myxiniformes;

Myxinidae; Eptatretinae; Eptatretus.
                                          ;
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0
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    Length 350;
                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scott J.C.;
Submitted (JAN-1998) to the EMBL/GenBank/DDBJ databases.
EMBL; AF044408; AAC00515.1; -
InterPro; IPR000886; ER_target.
InterPro; IPR001580; Calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C57394C6FB4CD77B CRC64;
                                                                                                                                                                                                                                                                 01-JUN-1998 (TrEMBLrel. 06, Created)
01-JUN-1998 (TrEMBLrel. 06, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-WAY-2000 (TrEMBLrel. 13, Created)
01-WAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
Score 108; DB 5; L
Pred. No. 1.9e-07;
3; Mismatches 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        321 AA
                                                                                                                                                                                                                             396 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 2.
PROSITE; PS000014; ER_TARGET; UNKNOWN_1.
SEQUENCE 396 AA, 45813 MW, CS7394C6FB4
                                                                                                      136 CGMATKRIHVIFNYKGQNHLIKKDIPC 162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRINTS; PRUDEZO; CALRETICULIN; 1.
PRODIN; PD001866; CALRETICULIN.; 1.
PROSITE; PS00803; CALRETICULIN.; 1.
                                                                                                                                                                                                                             PRT;
                                                                                 1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE=LIVER;
MEDLINE=20063780; Pubmed=10594174;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          genes.";
J. Mol. Evol. 49:729-735(1999).
BEL; ABO25323; BAA88476.1;
INTERPRO; IPRO00886; ER_Larget.
InterPro; IPRO01580; Calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pfam; PF00262; calreticulin; 1. PRINTS; PR00626; CALRETICULIN.
                                        3;
Query Match 71.5%;
Best Local Similarity 70.4%;
Matches 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A. STRAIN=PHILIPPINE (MINDORO);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19; Conservative
                                                                                                                                                                                                                             PRELIMINARY;
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DR Pfum; PF00262; calreticulin; 1.
DR PRINTS; PR00626; CALRETICULIN.
DR PROSITE; PS00804; CALRETICULIN.2; 1.
DR PROSITE; PS00805; CALRETICULIN_REPEAT; 3.
DR PROSITE; PS00001; CALRETICULIN_REPEAT; 3.
DR PROSITE; PS000014; ER_TARGET; UNKNOWN_1.
FT NON_TER 1 1 1 1 1 SQ SEQUENCE 321 AA; 37367 MW; 6E8DFA98D42F7AEF CRC64;
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Query Match 65.6%; Score 99; DB 13; Length 321; Rest Local Similarity 66.7%; Pred. No. 3.3e-06; Matches 18; Conservative 3; Mismatches 6; Indels 0; Gaps 0;

Sourch completed: January 9, 2002, 15:03:28 Job time: 270 sec

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GenCore version 4.5
Copyright (c) 1993 - 2000 Compugen Ltd.
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January 9, 2002, 15:12:15; Search time 25.18 Seconds (without alignments) 39.315 Million cell updates/sec OM protein - protein search, using sw model Run on:

US-09-828-000-5 151 1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27 Title: Perfect score: Sequence:

Scoring table:

BLOSUM62 Gapop 10.0 , Gapext 0.5

100059 seqs, 36664827 residues Searched:

Total number of hits satisfying chosen parameters:

100059

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

SwissProt_39:* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description	P52193 bos taurus	P14211 mus musculu	3 rattu	P27797 homo sapien	3 oryct	~	P29413 drosophila	_		Q9std3 chlamydomon		081919 beta vulgar					Q9sly8 oryza sativ	004151 arabidopsis		3 ricinus	Q40401 nicotiana p	zea mays (-	P02567 caenorhabdi	P39994 saccharomyc	P13594 mus musculu	P13592 homo sapien	1 homo	36 bos t	6 rattus	00 gal	32 mus mus
SUMMARIES	ID		CRTC_MOUSE	CRTC_RAT	CRTC_HUMAN	CRTC_RABIT	CRT2_BOVIN	CRTC_DROME	RAL1_ONCVO	CRTC_SCHMA	CRTC_CHLRE	CRTC_CAEEL	CRTC_BETVU	CRT3_ARATH	CRTC_PRUAR	CRT2_ARATH	CRTC_DICDI	CRTC_ORYSA	CRT1_ARATH	CRTC_EUGGR		CRTC_NICPL	CRTC_MAIZE	CRTC_BERST	VDHA_CHICK	MYSD_CAEEL	YECO_YEAST	NCA2_MOUSE	NCA2_HUMAN	NCA1_HUMAN	NCA1_BOVIN	NCA1_RAT	NCA1_CHICK	NCA1_MOUSE
	DB	-	П	-	-		-	٦	7	7	٦	Т	П	П	7	-	7	٦	7	-	٦	Н	П	7	П.	_	-	-	Н	Н	-	-	Н	-
	Length	4	416	416	417	418	421	406	388	393	420	395	416	424	421	424	424	424	425	401	415	416	420	416	463	1938	260	725	761	848	853	828	1091	1115
ď	Query	100.0	100.0	100.0	100.0	100.0	100.0	88.7		4	64.2	•						55.0			54.3		7.		Š.	4	ω.	ë.	ω.	ë.		33.8		33.8
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	Result No.	-	7	e	4	2	9	7	æ	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	56	27	28	59	30	31	32	33

Q04957 bacillus ca P57531 buchnera ap	P17545 trypanosoma P17546 trypanosoma	P34652 caenorhabdi O10548 mycobacteri	P55045 Streptococc	V30329 atabloopsis P16170 xenopus lae		P29059 nicotiana t	
DPO1_BACCA MLTA_BUCAI	RPB1_TRYBB RPB2_TRYBB	CALX_CAEEL	FPG_STRMU	NCA1_XENLA	NCA2_XENLA	CHI3_TOBAC	CALX_PEA
		- Г			_	<u>, , , , , , , , , , , , , , , , , , , </u>	-
877 359	1766	619	273	1088	1092	334	551
32.5	32.1 32.1	31.5	31.1	31.1	31.1	30.8	30.8
49	48.5	47.5	74	47	47	46.5	46.5
34 35	36 37	36 36 86	0.4	4 4 7	43	44	45

ALIGNMENTS

RESULT

	PRT; 400 AA.		aedneuce nb	update)	RM 1 (CRP55) (CALREGULIN) (HACBP).		ta; Eutel	cetartiodactyla; Ruminantia; Pecora; Bovoldea; os					8135753;	brain calreticulin.";			BINDING SIIES.	Namili Milliotead Othok Idodna	ENDOPERAMENT RELICOLOM	ofice control of the	arget.	in; 1,	ULIN.	culin; 1.	ET; 1.	CULIN_1; 1.	COLIN DEPENDENT. 3	CALKETICOLIN_KEFEAI; 3. lum; Calcium-binding; Repeat; Glycoprotein.	•	P-DOMAIN.	-DOMAIN.	4 X APPROXIMATE REPEATS.	1-1.	1-3	-4	3 X ADDROXIMATE REDEATS		2-2.	2-3.	ASP/GLU/LYS-RICH.		GLCNAC).	PREVENT SECRETION F	MW; 7D4B68DFC689EEF1 CRC64;
	BOVIN STANDARD;	(Rel. 34,	(Rel. 34,	1996 (Rel. 34, Last		(Bovine)	; Metazoa;	Eutheria;	ID=0013.	, CICC-CIV	[ir	Brain:	MEDLINE=94183174; PubMed=8135753	ent structure of bow	Biochem. J. 298:435-442(1994)	FUNCTION: THIS PROTEIN BINDS	LOW AFFINIT CALCIUM-BINDING	SUBUNIT: MONOMER.	SUBCELLULAR EUCALION: ENDOR	_	ro: IPR000886: ER target		; PRO0626; CALRETICULIN	PD001866;		PS00803;	1000000	reticu	-	181 291			103 204				242 252			334 390	120	162	397 4	DE 400 AA; 46381
CRT1 BOVIN	ID CRT1_BC	DT 01-0CT-1996			_		OC Eukaryota;	OC Mammalia;							Bioc	CC -!- FUR		CC - i - sol	<u>.</u> :							DR PROSITE;				_	_		FT KEPEAT						FT REPEAT	_	FT DISULFID			SQ SEQUENCE

Score 151; DB 1; Length 400; Pred. No. 2.4e-14;

100.08;

Query Match • Best Local Similarity

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CRTC_RAT
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                                                                   DOMAIN
DOMAIN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 P SEQUENCE OF ...
TISSUE FibrobiagE;

M MELINE-95009907; Pubmed 7523108;
M MCTICK B.A. Patterson R.M., Wichter L.L., He C., Selkirk J.K.;
M Separation and sequencing of familiar and novel murine proteins
MT using preparative two-dimensional gel electrophoresis.";
M Electrophoresis 15:735-745(1994).
CC --- FUNDTION: THIS PROPEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND
CC --- SUBUNIT: MONOMER (BY SIMILARITY).
CC --- SUBCELLUIAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
CC --- SUBCELLUIAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
CC --- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
CC --- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
MEDLINE. 93013037; Pubmed 1398135;
MAZZATella R.A., Gold P., Cunningham M., Green M.;
"Determination of the sequence of an expressible cDNA clone encoding Ekp60/cairequiin by the use of a novel nested set method.";
Gene 120:217-225(1992).
  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Smith M.J., Koch G.L.E.;
Multiple zones in the sequence of calreticulin (CRP55, calregulin,
HACHP), a major calcium binding ER/SR protein.";
EMBO J. 8:3581-3586(1989).
                                                                                                                                                                                                                                                                                                                                                                                 Kukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
NCBI_TaxID-10090;
  ;
0
                                                                                                                                                                                                                                            01-JaN-1990 (Rel. 13, Created)
01-JaN-1990 (Rel. 13, Last sequence update)
11-DEC-1998 (Rel. 37, Last annotation update)
CALRETICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP) (ERP60).
  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Probon; PD001866; Calreticulin; 1.
PROSITE; PS00014; ER_TARGET; 1.
PROSITE; PS00804; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 3.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A., AND SEQUENCE OF 18-48 AND 129-161.
STRAIN-BALB/C; TISSUE-Liver;
MEDLINE-90059955; Pubmed-2583110;
  ö
                                                                                                                                                                                                     416 AA
  0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PIR; 806763; 806763.
PIR; 301444; 301444.
SWISS-2DPAGE; P14211; MOUSE.
MGD; MGI:88252; Calr:
InterPro; IPR001580; Calreticulin.
InterPro; IPR001880; Calreticulin.
PF00262; Calreticulin; 1.
                                                                     120 CGPGTKKVHVIFNYKGKNVLINKDIRC 146
                                         1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
                                                                                                                                                                                                     PRT;
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27; Conservative
                                                                                                                                                                                                     STANDARD;
                                                                                                                                                                                                                                                                                                                                                              (Mouse)
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                                                                                                                                                                                                                                                                                                                                                            Mus musculus
                                                                                                                                                                                                CRTC_MOUSE
P14211;
                                                                                                                                                       RESULT 2
CRTC_MOUSE
  Matches
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Mammalia; Eutherla; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nakamura M., Moriya M., Baba T., Michikawa Y., Yamanobe T., Arai K., Okinaga S., Kobayashi T.;
"An endoplasmic reticulum protein, calreticulin, is transported into the acrosome of rat sperm.";
the acrosome of rat sperm.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                P18418; P10452;
01-MAR-1989 (Rel. 10, Created)
01-NOV-1990 (Rel. 16, Last sequence update)
01-NOV-1997 (Rel. 35, Last annotation update)
CALRETICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP) (ERP60) (CALBP)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRAIN-SPRAGUE-DAWLEY, TISSUE-Brain cortex;
MEDLINE-90370496; PubMed-2395661;
Murthy K.K., Banville D., Srikant C.B., Carrier F., Bell A.,
Holmes C., Patel Y.C.;
Rictural homology between the rat calreticulin gene product and
the Onchocerca volvulus antigen Ral-1.";
Nucleic Acids Res. 18:4933-4933(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE-95181573; PubMed=7876339; Scenichsen B., Fuellekrug J., van Nguyen P., Diekmann W., Soenichsen B., Mieskes G., Mieskes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PREVENT SECRETION FROM ER
24C03B0091340BDB CRC64;
                                                                                                                                               C-DOMAIN.
4 X APPROXIMATE REPEATS.
                                                                                                                                                                                                                                                                                                                                                                                                    3 X APPROXIMATE REPEATS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 151; DB 1;
Pred. No. 2.5e-14;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ASP/GLU/LYS-RICH.
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                             CALRETICULIN
                                                                                                                 P-DOMAIN.
                                                                           N-DOMAIN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
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Best Local Similarity 100.
Matches 27; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Identification of protein disulfide isomerase and calreticulin as autoimmune antigens in LEC strain of rats.";
Blochim. Blochis. Acta 1158:339-34(1993).
-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUW-BINDING SITES.
-!- SUBGUNIT: MONOMER (BY SIMILARITY).
-!- SUBGULICHAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SIMILARITY: BELONGS TO THE CARRETICULIN FAMILY.
-!- CAUTION: WAS ORIGINALLY (REF.2) THOUGHT TO BE D-BETA-
HYDROXYBUTYRATE DEHYDROGENASE.
                                                                                            Treves S., de Mattei M., Lanfredi M., villa A., Green N.M., Maclennan D.H., Meldolesi J., Pozzan T.:
(Calreticulin is a candidate for a calsequestrin-like function in Ca2(+)-storage compartments (calciosomes) of liver and brain."; Biochem. J. 271:473-480(1990).
                                                                                                                                                                                                                                                                                                                                                                                   STRAIN-LEC; TISSUB-Liver;
MEDLINE-94072621; PubMed-8251535;
Yokol T., Nagayama S., Kajiwara R., Kawaguchi Y., Horiuchi R.,
Kamataki T.;
                                                                                                                                                                                                                                   STRAIN-SPRAGUE-DAWLEY; TISSUE-Testis;
MEDIINE-92360010; PubMed-1497655;
Nakamura w. Michikawa Y., Baba T., Okinaga S., Arai K.;
"Calreticulin is present in the acrosome of spermatids of rat
Lone Y.C., Bailly A., Latruffe N.; Submitted (DEC-1988) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRINTS: PRO0626; CALRETICULIN.
PRODOM: PD001866; Calreticulin: 1.
PROSITE: PS00014; ER_TARGET: 1.
PROSITE: PS00803; CALRETICULIN_1; 1.
PROSITE: PS00804; CALRETICULIN_2; 1.
PROSITE: PS00805; CALRETICULIN_REPEAT; 3.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal.
SIGNAL
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4 X APPROXIMATE REPEATS.
                                                                                                                                                                                                                                                                                                                                    Biochem. Biophys. Res. Commun. 186:668-673(1992)
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P-DOMAIN.
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EMBL; X13702; CAA31987.1; ALT_SEQ.
EMBL; X79327; CAA55890.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro: IPR001580; Calreticulin.
InterPro: IPR000886; ER_target.
Pfam; PF00262; calreticulin; 1.
                                                         SEQUENCE OF 18-29.
MEDLINE=91054414; Pubmed=2241926;
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PIR: S11205; S11205.
PIR: S13045; S13045.
PIR: A49176; A49176.
PIR: S46336; S45036.
PIR: JH0819; JH0819.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   [5]
SEQUENCE OF 18-36.
MEDLINE-92002034; PubMed=1911778;
MEDLINE-92002034; PubMed=1911778;
Rojiani M.V., Finlay B.B., Gray V., Dedhar S.;
"In vitro interaction of a polypeptide homologous to human Ro/SS-A antigen (calreticulin) with a highly conserved amino acid sequence in the cytoplasmic domain of integrin alpha subunits.";
Biochemistry 30:9859-9866(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A. MEDINDE-1733953; MEDLINE-92129342; PubMed-1733953; MCGauliffe D.P., Yang Y.S., Wilson J., Sontheimer R.D., Capra J.D.; "The 5'-flanking region of the human calreticulin gene shares homology with the human GRP78, GRP94, and protein disulfide isomerase
                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-AUG-1992 (Rel. 23, Created)
01-AUG-1992 (Rel. 23, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
CALRETICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP) (ERP60) (52 KDA RIBONUCLEOPROTEIN AUTOANTIGEN RO/SS-A).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Rokeach L.A., Haselby J.A., Meilof J.F., Smeenk R.J., Unnasch T.R., Greene B.M., Hoch S.O.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              'Molecular cloning, expression, and chromosome 19 localization of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Lamerdin J., McCready P., Stilwagen S., Ramirez M., Carrano A.; Submitted (MAR-1997) to the EMBL/GenBank/DDBJ databases.
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                                                                                                                                                                                                                                                     Length 416;
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                                                                                                                                                                                                                                                                                                       Indels
                                                                                               ASP/GLU/LYS-RICH.
BY SIMILARITY.
PREVENT SECRETION FROM ER.
2E6713CED31A2970 CRC64;
3 X APPROXIMATE REPEATS. 2-1.
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Pred. No. 2.5e-14;
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                                                                                                                                                                                                                                                                                                    0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    human Ro/SS-A autoantigen.";
J. Clin. Invest. 85:1379-1391(1990)
                                                                                                                                                                                                                                                                                                                                                       1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
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SEQUENCE OF 18-32.
MEDLINE-90380058; PubMed-2400400;
e:mmorman H.K.B., Jo
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MEDLINE=92013129; PubMed=1919005;
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                                                                                                                                                                           MM;
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100.0%;
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                                                                                                                                                                                                                                                      -1- CAUTION: WAS ORIGINALLY (REF. 2) THOUGHT TO BE THE RO AUTOANTIGEN.
                                                                                                                                                                                                      "Micromequences of 145 proteins recorded in the two-dimensional gel protein database of normal human epidermal keratinocytes."; Electrophoresis 13:960-969(1992).
"Sequence similarity of calreticulin with a Ca2(+)-binding protein that co-purifies with an Ins(1,4,5)P3-sensitive Ca2+ store in HL-60
                                                                               Mochstrusser D.F., Frutiger S., Paquet N., Bairoch A., Ravier F. Pasquall C., Sanchez J.-C., Tissot J.-D., Bjellqvist B., Vargas Appel R.D., Hughes G.J.;
                                                                                                                                                                                   Rasmussen H.H., van Damme J., Puype M., Gesser B., Celis J.E., Vandekerckhove J.;
                                                                                                            "Human liver protein map: a reference database established by microsequencing and gel comparison."; Riectrophoresis 13:992-1001(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pfam; PF00262; calreticulin; 1.
Prinrs; PR00626; Calreticulin; 1.
Proposition P0001866; Calreticulin; 1.
PROSITE; PS0014; ER_TARGET; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_EPERT; 3.
ENGORITE; PS00805; CALRETICULIN_REPERT; 3.
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P-DOMAIN.
C-DOMAIN.
4 X APPROXIMATE REPEATS.
1-1.
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Interpro; IPR000886; ER_target.
                                                                     MEDLINE 93162045; PubMed 1286669;
                                                                                                                                                                         MEDLINE-93162043; PubMed-1286667;
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Aurhus/Ghent-ZDPAGE; 9401; IEF.
HSC-ZDPAGE; P27797; HUMAN.
                             Biochem. J. 270:545-548(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; M84739; AAA51916.1; -.
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PIR, A37047, A37047
PIR, S11475, S114775,
PIR, A42330, A42330,
PIR, A46452, A46452.
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                                                  SEQUENCE OF 18-28.
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Milner R.E., Baksh S., Shemanko C., Carpenter M.R., Smillie L.,
Vance J.E., Opas M., Michalak M.;
"Calreticulin, and not calsequestrin, is the major calcium binding
protein of smooth muscle sarcoplasmic reticulum and liver endoplasmic
reticulum.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
TISSUE $3.00 + twitch skeletal muscle;
MEDILINE $90094320; pubMed=2600080;
Fliegel L., Burns K., Maclennan D.H., Reithmeier R.A.F., Michalak M.;
"Modecular cloning of the high affaity calcium-binding protein (calreticulin) of skeletal muscle sarcoplasmic reticulum.";
J. Biol. Chem. 264:21522-21528(1989).
                                                                                                                                                                                                                                                                                                                                                 Gaps
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MEDLINE-201654414, PubMed-2241926;
Treves S., de Mattei M., Lanfredi M., Villa A., Green N.M.,
Maclennan D.H., Meldolesi J., Pozzan T.;
Maclennan D.H., Mendolesi G. R., Pozzan T.;
Calreticulin is a candidate for a calsequestrin-like function in
Cal(+)-storage compartments (calciosomes) of liver and brain.";
Biochem. J. 271:473-480(1990).
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Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Lagomorpha, Leporidae, Oryctolagus.
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MEDLINE:91282795; PubMed=2059224;
Fliegel L., Michalm M.;
"Fast-twitch and slow-twitch skeletal muscles express the same
                                                                                                                                                                                                                                                                                                     Length 417;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-OCT-1996 (Rel. 34, Last annotation update)
CALRETICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP) (ERP60).
                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                              SECRETION FROM ER
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BC37C3C0F1054FB2 CRC64;
                                                                3 X APPROXIMATE REPEATS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  isoform of calreticulin.";
Blochem. Biophys. Res. Commun. 177:979-984(1991).
                                                                                                                                                                                                                                                                                                     100.0%; Score 151; DB 1; 100.0%; Pred. No. 2.5e-14;
                                                                                                                                                   ASP/GLU/LYS-RICH.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           418 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-APR-1990 (Rel. 14, Created)
01-APR-1990 (Rel. 14, Last sequence update)
                                                                                                                                                                                                                                                                                                                                               0; Mismatches
                                                                                                                                                                                                PREVENT
                                                                                                                                                                                                                                                                                                                                                                                                              137 CGPGTKKVHVIFNYKGKNVLINKDIRC 163
                                                                                                                                                                                                                                                                                                                                                                                          1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Biol. Chem. 266:7155-7165(1991).
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MEDLINE~92002038; PubMed~1911780;
1-2.
1-4.
                                                                                                                                                                                                                                        48141 MW;
                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 100.
Matches 27; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
221
238
255
297
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                                                                                                                                                                                                                                    417 AA;
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01-OCT-1996
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P15253;
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                                                                                                                                                                                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through a collaboration
      15-JUL-1998 (Rel. 36, Last annotation update) CALRETICULIN, BRAIN ISOFORM 2 PRECURSOR (CRP55) (CALREGULIN) (HACBP).
                                                                                                                                                                                                                       Biochim. Biophys. Acta 1202:70-76(1993).
-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM-BINDING SITES.
-!- SUBMILT: MONOMER (BY SIMILARITY).
-!- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                 Mammalia, Eutheria, Cetartiodactyla, Ruminantia, Pecora, Bovoidea,
                                                                                                                                                                             Liu N., Fine R.E., Johnson R.J.; "Comparison of cDNAs from bovine brain coding for two isoforms of
                                   Bos taurus (Bovine).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N-LINKED (GLCNAC. ..) (POTENTIAL).
PREVENT SECRETION FROM ER.
0257E959F71528BC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CALRETICULIN, BRAIN ISOFORM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 3.
Endoplasmic reticulum, Calcium-binding; Repeat; Signal. SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C-DOMAIN.
4 X APPROXIMATE REPEATS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3 X APPROXIMATE REPEATS 2-1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ASP/GLU/LYS:RICH.
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P-DOMAIN.
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InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; Ex.target.
InterPro; PR00626; Calreticulin; I.
PRINTS; PR00626; CALRETICULIN.
ProDom; PD001866; Calreticulin; 1.
                                                                                                                                                           MEDLINE-93385184; PubMed-8373827;
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                                                                                 Bovidae; Bovinae; Bos
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                                                                                                                             SEQUENCE FROM N.A.
                                                                                              NCBI_TaxID-9913;
                                                                                                                                              TISSUE-Brain;
                                                                                                                                                                                                            calreticulin.
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2-2.
2-3.
ASP/GLU/LVS-RICH.
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PREVENT SECRETION FROM ER.
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PRODOM; PROD1866; Calreticulin; 1.
PROSITE; PSO00014; ER TARGET; 1.
PROSITE; PSO08003; CALRETICULIN_1; 1.
PROSITE; PSO08004; CALRETICULIN_2; 1.
PROSITE; PSO0805; CALRETICULIN_REPEAT; 3.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -> T (IN REF. 5).
B6082B689DC763A6 CRC64;
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4 X APPROXIMATE REPEATS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 151; DB 1;
Pred. No. 2.6e-14;
Mismatches 0;
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(Rel. 32, Last sequence update)
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P-DOMAIN.
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PIR; S13047; S13047.
InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
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PIR; C33208; C33208.
PIR; D33208; D33208.
PIR; E33208; E33208.
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RA Adams M.D., Celniker S.E., 1401 K.A., Evans C.A., Gocayne J.D.,
RA Adams M.D., Celniker S.E., Richards S., Ashburner M., Henderson S.N.,
Grorge R.A., Levis S.E., Richards S., Ashburner M., Henderson S.N.,
Ration G.G., Worthan J.R., Yandell M.D., Zhang Q., Chen L.X.,
R. Bardon R.C., Rogers Y.-H.C., Blazej R.G., Change M., Miklos G.L.G.,
RA Abril J.F., Agbayani A., An H.-J., Andrews-Pfannkoch C., Baldwin D.,
RA Beneon K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S.,
Rokrova D., Botchan M.R., Bouck J., Brokstein P., Brottier P.,
Ratis K.C., Busam D.A., Buller H., Cadleu E., Center A., Chandra I.,
Rokrova D., Botchan M.R., Bouck J., Brokstein P., Brottier P.,
Ruttis K.C., Busam D.A., Buller H., Cadleu E., Center A., Chandra I.,
Ruttis K.C., Eusam D.A., Buller H., Cadleu E., Conter A., Chandra I.,
Roknon K., Doup L.E., Downes M., Dudan-Robe S., Pleischman W.,
Roubin K.J., Evangelista C.C., Ferraz C., Ferriera S., Pleischman W.,
Ruttis M.C., Gabriellan A.E., Garg N.S., Gelbart W.M., Classer K.,
RA Hustin D., Houston K.A., Howland T.J., Hernandez J.R., Houck J.,
Houth M., Kalush F., Karpen G.H., Ke Z., Kennison J.A., Ketchum K.A.,
Hustin D., Houston K.A., Howland T.J., Hernandez J.R., Houck J.,
Huston D.R., Matrol B., McIntosh T.C., McIeod M.P., Morberson D.L.
Ausko P., Lei Y., Levitsky A.A., Li J.J., Li Z., Liang Y., Lin X.,
Lusko P., Lei Y., Levitsky A.A., Li J.J., Li Z., Liang Y., Lin X.,
Ruiner B.E., Kodire C.D., Kraft C., Morris J., Mosherson D.L.
Autrilon G.M., Murphy B., Murphy L., Muzny D.M., Nelson D.L.,
Ruskon D.R., Mathamos I., Simpson M., Stupski M.P., Santh T.,
Shue B.C., Stoner K.A., Wasuaman D.A., Wenter E., Wang K.H., Wang X.,
Wasuaman D.A., Wasuaman D.A., Wenter E., Wang K.J.,
Walliams S.M., Woodage T., Worley K.C., Wu D., Yang S., Zho C.,
Rusham R.L., Shore K., Worley E.W., Rubin G., Santer T.,
Rusham R.L., Shore R.W., Rubin G.W., Wang S., Zhu N., Salber R.,
Schue S., 2007, 2185, 2196, 2196, 2196, 2196, 2196, 2196, 2196, 2
                                                                                                                                                                              Drokophila melanoguster (Fruit fly).
Rukaryota; Metazoa; Arthropoda; Trachesta; Hexapoda; Insecta;
Pervyota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroideu; Drosophilidae; Drosophila.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "A human Ro/SS-A autoantigen is the homologue of calreticulin and is highly homologous with onchocercul RAL-1 antigen and an aplysia mannary molecula," ".
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McCuuliffo D.P., Zappi E., Lieu T.S., Michalak M., Sontheimer R.D.,
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-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW APFINITY CALCIUM-BINDING SITES.
-!- SUBGELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nucleotide sequence of a Drosophila melanogaster gene encoding walreticulin homologue.":
                         01.APR-1993 (Rel. 25, Created)
01.COT-1993 (Rel. 27, Last sequence update)
20.AUG-2001 (Rel. 40, Last annotation update)
CALRETICULIN_PRECURSOR (CRP55) (CALREGULIN) (HACBP).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE-20196006; PubMed-10731132;
                                                                                                                                                                                                                                                                                                                                                                     ŚKÓUENCE FROM N.A.
MEDLINK 93208374; PubMed∴1296819;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE OF 91-124 AND 182-220
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA Seq. 3:247-250(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          calreticulin homologue
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P29413; Q9VHA3;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
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MEDLINE-94341871; PubMed-7520419;
MEDLINE-94341871; PubMed-7520419;
MEDLINE-94341871; PubMed-7520419;
Reparable of the Onchocerca volvulus RALI antigen, a member of the calreticulin family of proteins, recognized by sera from patients with onchocerciasis.";
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Onchocercidae; Onchocerca.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              88.7%; Score 134; DB 1; Length 406; 88.9%; Pred. No. 6.7e-12;
                                                                                                                                                                                                                                                                                                                                            InterPro; IPR001580; Calrettculin.
InterPro; IPR00886; ER_target.
Pfam; PF00262; Calrettculin; 1.
PRINTS; PR00626; CALRETICULIN; 1.
PROSITE; PS00014; ER_TARGET; 1.
PROSITE; PS00804; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CALRETICULIN.
G -> A (IN REF. 3).
V -> L (IN REF. 3).
; 65D72C69D0BEC427 CRC64;
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01-NOV-1995 (Rel. 32, Last sequence update)
01-0CT-1996 (Rel. 34, Last annotation update)
RAL-1 PROTEIN PRECURSOR (41 KDA LARVAL ANTIGEN).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        388 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No. 6.7e
2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  137 CGPGTKKVHVIFSYKGKNHLISKDIRC 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Infect. Immun. 62:3696-3704(1994).
                                                                                                                                                                                                                                                       EMBL; AE003683; AAF54416.1; -. PIR; A37158; A37158; FlyBase; FBgn0005585; Crc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          46808 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE OF 53-388 FROM N.A.
                                                                                                                                                                                                                               EMBL; X64461; CAA45791.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        24; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Onchocerca volvulus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       406 AA,
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Matches 24; Conserv
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P11012;
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RAL1_ONCVO
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20-AUG-2001
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REPEAT
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modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
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OR0814; 026562;
01-JUN-1994 (Rel. 29, Created)
01-FEB-1996 (Rel. 33, Last sequence update)
01-FEB-1997 (Rel. 35, Last annotation update)
CALRETICULIN PRECURSOR (SM4 PROTEIN).
Schistcosoma mansoni (Blood fluke).
Eukaryota; Metazoa; Platyhelminthes; Turbellarian Platyhelminths;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Biochem. Parasitol. 62:313-315(1993).
FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM-BINDING SITES.
SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDITNE-94187805; Pubmed-8139623;
Khalife J., Pierce R.J., Godin C., Capron A.;
"Cloning and sequencing of the gene encoding Schistosoma mansoni
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rhabdítophora; Eulecithophora; Revertospermata; Mediofúsata;
Neodermata; Trematoda; Digenea; Strigeldida; Schistosomatoidea;
Schistosomatidae; Schistosoma.
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Khalife J., Trottein F., Schacht A.-M., Godin C., Pierce R.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Cloning of the gene encoding a Schistosoma mansoni antigen homologous to human Ro/SS-A autoantigen."; Mol. Biochem. Parasitol. 57:193-202(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 388;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BY SIMILARITY.
9537F298A2D31CD6 CRC64;
                                                                                                                                                                                                                                                                   RAL-1 PROTEIN.
4 X APPROXIMATE REPEATS.
                                                                                                                                                                                                                                                                                                                                                                               X APPROXIMATE REPEATS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 121; DB 1;
Pred. No. 4.7e-10;
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                                                                                                                 Pfam; PF0026; calreticuln; 1.
PRINTS; PR00626; CALRETICULIN.
PRODOM; P0001866; CALRETICULIN.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_2; 3.
                                                                                                                                                                                                                                Calcium-binding; Repeat; Antigen; Signal. SIGNAL 17 POTENTIAL.
                    Littles requires a license agreement (S
send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
                                                                                             rik; A3230/; A3230/.
InterPro; IPR001580; Calreticulin.
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77.88;
                                                                   EMBL; M20565; AAA59056.1; -. PIR; A32507; A32507.
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STRAIN-PUERTO RICAN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
STRAIN-PUERTO RICAN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    388 AA;
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                                                                                                                                                                                                                                                                                                                                                              ProDom; PUDULEUS; PERFORMENT 1.
PROSITE; PS008014; ERTETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 1.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal; Glycoprotein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
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Eukaryota; Viridiplantae; Chlorophyta; Chlorophyceae; Volvocales;
Chlamydomonadaceae; Chlamydomonas.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HIGH AND
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-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH LOW AFFINITY CALCIUM-BINDING SITES (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CALRETICULIN.

4 x 12 AA APPROXIMATE REPEATS.

1-1.
1-2.
1-3.
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45F59857C21940D2 CRC64;
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N-LINKED (GLCNAC. ..)
SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
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IG (IN REF. 2).
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Pred. No. 9.2e-09;
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                                                                                                                                                                                                                                                                       InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
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77.8%;
                                                                                                                                                                                                         EMBL; M93097; AAA29854.1; -.
                                                                                                                                                                                                                               L24159; AAA19024.1;
P00268; 4RXN.
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Matches 21; Conser
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SEQUENCE FROM N.A.
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InterPro;
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REPEAT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
-1- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoidea;
Rhabditidae; Peloderinae; Caenorhabditis.
NCHI_TaxID:6239;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CALRETICULIN.
PREVENT SECRETION FROM ER (POTENTIAL).
DD3BA3AFFBF61C9B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA Seq. 2:235-240(1992).
-1- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "A C. elegans gene encodes a protein homologous to mammalian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             64.2%; Score 97; DB 1; Length 420;
69.2%; Pred. No. 1.4e-06;
Live 2; Mismatches 6; Indels
                                                                                                                                                                                                                                                            InterPro; IPR001805; Calrettaulin.
InterPro; IPR001806; ER_target.
InterPro; PR00205; Calrettaulin.
Prints; PR000205; Calrettaulin; 1.
PROSTE; PR0001466; Calrettaulin; 1.
PROSTE; PR00014; ER_TARGET; 1.
PROSTE; PR00004; CALRETICULIN_1; 1.
PROSTE; PR00004; CALRETICULIN_2; 1.
PROSTE; PR000804; CALRETICULIN_2; 1.
PROSTE; PR00805; CALRETICULIN_2; 1.
RADGLusmic reticulum; Calcium-binding; Repeat; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOW AFFINITY CALCIUM BINDING SITES.
-1- SUBCELLUIAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-1- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-AUG-1992 (Rel. 23, Created)
01-AUG-1992 (Rel. 23, Last sequence update)
01-FEB-1994 (Rel. 28, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     395 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 CGPGTKKVHVIFNYKGKNVLINKDIR 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
STRAIN-BRISTOL N2;
MEDLINE 92329978; Pubmed 1627827;
                                                                                                                                                                                                                                                   EMBL; AJ000765; CAB54526.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   47327 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; X59589; CAA42159.1; -. PIR; S25851; S25851.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 69.29
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-FEB-1994 (Rel. 28, L
CALRETICULIN PRECURSOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Cuenorhubditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                420 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   calreticulin,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Smith M.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CRTC_CAEEL
P27798;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CRTC_CAREL
STATEMENT OF STATE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "Nucleotide sequence from sugar beet calreticulin.";
Submitted (OCT-1997) to the EMBL/GenBank/DDBJ databases.
-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND
LOW AFFINITY CALCIUM-BINDING SITES (BY SIMILARITY).
-!- SUBCELLULAR LOCATION: BENOPLASMIC RETICCULM LUMEN (BY SIMILARITY).
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Beta vulgaris (Sugar beet).

Makaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Caryophylidae; Caryophyllales; Chenopodiaceae; Beta.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 395;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4; Indels
       PIGNIS, FROGES, CALRETICULIN.
PRODOM; PD001866; CALRETICULIN.
PROSITE: PS00014; ER_TARGET; 1.
PROSITE: PS000804; CALRETICULIN.]; 1.
PROSITE: PS00804; CALRETICULIN.2; 1.
PROSITE: PS00805; CALRETICULIN.2; 1.
PROSITE: PS00805; CALRETICULIN.REPEAT; 3.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BY SIMILARITY.

PREVENT SECRETION FROM ER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   35CA7D2EC1D56B03 CRC64;
                                                                                                                                                                                                                                                                            C-DOMAIN.
4 X APPROXIMATE REPEATS
                                                                                                                                                                                                                                                                                                                                                                                                                       3 X APPROXIMATE REPEATS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 96.5; DB 1;
Pred. No. 1.5e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ASP/GLU/LYS-RICH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20-AUG-2001 (Rel. 40, Created)
20-AUG-2001 (Rel. 40, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
CALRETICULIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              416 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4; Mismatches
                                                                                                                                                                                 POTENTIAL.
CALRETICULIN.
                                                                                                                                                                                                                               N-DOMAIN
                                                                                                                                                                                                                                                         P-DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          133 CGP-TRRVHVILNYKGENKLIKKEITC 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; AJ002057; CAA05161.1; -. Mendel; 32549; Betvu;1166;32549.
Pfam; PF00262; calreticulin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      X.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
STRAIN=VV-D/ZR5; TISSUE=Leaf;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  63.9%;
66.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 45616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity 66.7
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STANDARD;
                                                                                                                                                                                                                                                                                                                                             216
233
250
250
254
2278
2292
390
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1962
1962
1966
1972
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1973
1973
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CRTC_BETVU
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CONFLICT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 14
CRTC_PRUAR
                                                                                                                                                                                                                                                                                                                                                                                                                              CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SITE
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-1- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN (BY SIMILARITY).
-1- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                       InterPro; IPR000886; ER_target.
PRINTS; PR00626; Calreticulin; 1.
PRINTS; PR00626; Calreticulin; 1.
PROSTE; PR00014; ER_TARGET: 1.
PROSTTE; PS00804; CALRETICULIN_1; 1.
PROSTTE; PS00805; CALRETICULIN_2; 1.
PROSTE; PS00805; CALRETICULIN_2; 1.
PROSTE; PS00805; CALRETICULIN_2; 1.
PROSTE; PS00805; CALRETICULIN_BEPEAT; 2.
PROSTE; PS00805; CALRETICULIN_BEPEAT; 2.
PROSTE; PS00805; CALRETICULIN_BEPEAT; 2.
POTEWTIAL.
25 POTEWTIAL.
26 CALRETICULIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Arabidopsis thaliana (Mouse-ear cress).
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnollophyta; eudicotyledons; core eudicots; Rosidae;
eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Shinn P., Brooks S., Buehler E., Chao Q., Johnson-Hopson C., Khan S., Kim C., Altafi H., Bei Q., Chin C., Chiou J., Choi E., Conn L., Conway A., Gonzales A., Hansen N., Howing B., Koo T., Lam B., Lee J., Lenz C., Li J., Liu A., Liu S., Mukharsky N., Nguyen M., Palm C., Pham P., Sakano H., Schwartz J., Southwick A., Thaveri A., Toriumi M., Vaysberg M., Yu G., Federspiel N.A., Theologis A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                      CALRETICULIN.

N-LINKED (GLCNAC. ..) (POTENTIAL).

N-LINKED (GLCNAC. ..) (POTENTIAL).

PREVENT SECRETION FROM ER (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nelson D.E., Glaunsinger B., Bohnert H.J.; "Abundant accumulation of the calcium-binding molecular chaperone calreticulin in specific floral tissues of Arabidopsis thaliana.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 92; DB 1; Length 416; Pred. No. 7.1e-06; 1; Mismatches 9; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Submitted (JAN-2000) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           565FEC3489F77CA7 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CRT3_ARATH STANDARD; PRT; 424 AA. 004153; 095x1E7; 20-406-2001 (Rel. 40, Created) 20-AUG-2001 (Rel. 40, Last sequence update) 20-AUG-2001 (Rel. 40, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               143 CGYSTKKVHAIFNYNDTNHLIKKDVPC 169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
   InterPro; IPR001580; Calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE-97303616; PubMed-9159940;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Plant Physiol, 114:29-37(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        48136 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60.9%;
63.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ouery Match
Best Local Similarity 63.0%
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CALRETICULIN 3 PRECURSOR. CRT3 OR T27G7.13.
                                                                                                                                                                                                                                                                                                                                                                                        57
157
416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        416 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=3702;
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                                                                                                                                                                                                                                                                                                                                                                                           CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                          CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 13
CRT3_ARATH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DRADOR DRANGOR DRANGOR
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EMBL; AC006932; AAF22902.1; ALT_SEQ

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PROSITE; PS00014; ER_TARGET; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 2.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal; Glycoprotein.
                   InterPro; IPR001880; Calreticulin.
InterPro; IPR001886; ER_target.
Pfam; PF000562; calreticulin; 1.
PRINTS; PR00626; Calreticulin; 1.
PROSITE; PS000014; ER_TARGET: 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPRAY; FALSE_NEG:
Endoplasmic_reticulum; Calcium-binding; Repeat; Signal; Glycoprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids I; Rosales; Rosaceae; Prunus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                       POTENTIAL.
CALRETGULIN 3.
CALINED (GLCNAC. . .) (POTENTIAL).
PREVENT SECRETION FROM ER (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRAIN=CV. BERGERON; TISSUE=Mesocarp, and Endocarp, Mbeguie-A-Mbeguie D., Fils-Lycaon B.R.; "Molecular cloning and nucleotide sequence of a calreticulin from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 424;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                -> S (IN REF. 2).
650E0AE8342F0B97 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        58.3%; Score 88; DB 1; 155.6%; Pred. No. 2.7e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20-AUG-2001 (Rel. 40, Created)
20-AUG-2001 (Rel. 40, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
CALRETICULIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; AF134733; AAD32207.1; -.
InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
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Mendel; 16507; Arath;1166;16507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pfam; PF00262; calreticulin; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                            49904 MM;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15; Conservative
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424
97
424
279
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                                                                                                                                                                                                                                                                                                   Multigene family.
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Job time: 657 sec
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       038858; 080486; 004152;
20-AUG-2001 (Rel. 40, Created)
20-AUG-2001 (Rel. 40, Last sequence update)
CALKWITCULIN 2 PRECURSOR.
CHT2 OR CRIL OR 112M4.8.
Arabidopsis thailana (Mouse-ear cress).
Rukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnollophyta; eudicotyledons; core eudicots; Rosidae;
eurosida II; Brussicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRAIN-CV. COLUMBIA;
STRAIN-CV. COLUMBIA;
VyHOTSKala V.S., Schwartz J.R., Toriumi M., Yu G., Oji O., Kwan A.,
Liu S., Li J., Araujo R., Au M., Brendel V., Buehler E., Conway A.B.,
Conway A.R., Dewar K., Feng J., Kim C., Kurtz D., Li Y., Palm C.J.,
Shinn P., Sun H., Davis R.W., Ecker J.R., Fedorspiel N.A.,
                                                                                                                                                    Gaps
POTENTIAL.

CALRETICULIN.

N-LINKED (GLCNAC. ..) (POTENTIAL).

N-LINKED (GLCNAC. ..) (POTENTIAL).

PREVENT SECRETION FROM ER (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE OF 1-174 FROM N.A.
MEDLINE 97303616; PubMed 9159940;
Milson D.E., Glaunsinger B., Bohnert H.J.;
"Abundant accumulation of the calcium-binding molecular chaperone calrettculin in specific floral tissues of Arabidopsis thaliana.";
Plant Physiol. 114:29-37(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE OF 16-424 FROM N.A.
STRAIN-CV. LANDSBERG ERECTA; TISSUE Flower;
Benedetti C.E., Turner J.G.,
"Nucleotide sequence of an Arabidopsis thaliana cDNA encoding a
                                                                                                                                                  ;
0
                                                                                                                     57.6%; Score 87; DB 1; Length 421; 59.3%; Pred. No. 3.7e-05;
                                                                                                                                                  10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Submitted (NOV-1997) to the EMBL/GenBank/DDBJ databases
                                                                          4F5F94CBAA6C6690 CRC64;
                                                                                                                                                  1; Mismatches
                                                                                                                                                                                                                                                                                    424 AA
                                                                                                                                                                                                EMBL; AC003114; AAC24083.1; ALT_SEQ.
EMBL; U66344; AAC49696.1; ALT_INIT.
                                                                                                                                                                              1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
                                                                                                                                                                                                                                                                                    PRT;
                                                                          48416 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SWISS-2DPAGE; Q38858; ARATH.
Mendel; 6599; Arath;1166;6599.
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                                                                                                                                 Local Similarity 59.3 we 16; Conservative
                                                                                                                                                                                                                                                                                    STANDARD;
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                                                                                                                                                                                                                                                                                    CRT2_ARATH
                              CARBOHYD
CARBOHYD
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Matches
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CRT2_ARATH
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PRINTS; PRO0626; CALRETICULIN.
Prodom; PD001866; Calreticulin; 1.
PROSTTE; PS0014; ER_TRAGET; 1.
PROSTTE; PS00804; CALRETICULIN_1; 1.
PROSTTE; PS00805; CALRETICULIN_2; 1.
PROSTTE; PS00805; CALRETICULIN_REPEAT; 2.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal; Glycoprotein;
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                                                                                                                                                                                                                                     CALRETICULIN 2.
N-LINKED (GLCNAC. . .) (POTENTIAL).
PREVENT SECRETION FROM ER (POTENTIAL).
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                                                                                                                                                                                                                                                                                                                                                                                                          Length 424;
                                                                                                                                                                                                                                                                                       LVAI -> NSAR (IN REF. 3).

G -> E (IN REF. 1).

P -> T (IN REF. 3).

V -> E (IN REF. 3).

W, 514385EBAE810DD7 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                        57.6%; Score 87; DB 1; 59.3%; Pred. No. 3.8e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                           1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Search completed: January 9, 2002, 15:12:15
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
Mendel; 31147; Arath;1166;31147.
Mendel; 16506; Arath;1166;16506.
InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER.target.
Pfam; PF00262; Calreticulin; 1.
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Best Local Similarity 59.3
Matches 16; Conservative
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424
59
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1155
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408
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                                                                                                                                                                                                  Multigene family.
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421
16
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236
408
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CARBOHYD
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SEQUENCE
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GenCore version 4.5
Copyright (c) 1993 - 2000 Compugen Ltd.
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9, 2002, 15:02:02 ; Search time 43.73 Seconds (without alignments) 47.032 Million cell updates/sec January Run on:

US-09-828-000-5 151 1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27

Title: Perfect score: Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

219241 Total number of hits satisfying chosen parameters:

219241 seqs, 76174552 residues

Searched:

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

PIR_68:* Database :

pirl:* pir2:* pir3:* pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description	calreticulin, brai	calreticulin precu		calreticulin precu	_	calreticulin (clon		calreticulin autoa	calreticulin precu	calreticulin - bee	1	calreticulin - bar	calreticulin precu	calreticulin (Crt1	calreticulin - cas	н	hypothetical prote		calreticulin call	helicase [imported	vitamin D3 hydroxy	pyocin protein PA3	myosin heavy chain	hypothetical prote					
SUMMARIES	ID	S43376	S06763	JH0819	A37047	A34154	836799	JH0795	A56637	S71343	A32507	S29130	S29129	A48573	S25851	T14554	T05703	T05705	S58170	C36605	T10172	T07841	H86224	T03691	T16968	T43854	A53101	F83161	MWKW1	S50439
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de	Query Match	100		100	100	100	Н	93.	88	82	80.	79.5	79.	74.	63.	6.09		55.6		•	54.3			50.3				35.1	34.4	33.8
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	Result No.		7	m	4	5	9	7	œ	σ	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	56	27	28	59

RESULT 2
S06763
calreticulin precursor - mouse
N.Alternate names: 55K calcium-binding reticuloplasmin; calregulin
C.Species: Mus musculus (house mouse)
C.Species: Musculus (house mouse)
C.Species: Musculus (house mouse)
C.Species: Musculus (B. 1889
A.Title: Multiple zones in the sequence of calreticulin (CRP55, calregulin, HACBP), a
A.Reference number: S06763; MuID:90059955
A.Rocession: S06763
A.Rocession: S06763

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Gaps

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Length 400; Indels

100.0%; Score 151; DB 2; 100.0%; Pred. No. 3.5e-14; iive 0; Mismatches 0;

Best Local Similarity 100. Matches 27; Conservative

Query Match

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ALIGNMENTS

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137 CGPGTKKVHVIFNYKGKNVLINKDIRC 163
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Best Local Similarity
Matches 27; Conserv
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                                                                                                                     A; Status: preliminary
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R;Mazarellu, R.A.; Gold, P.; Cunningham, M.; Green, M.
Gene 120, 217-225, 1992
A;Title: Determination of the sequence of an expressible cDNA clone encoding ERp60/calre
A;Reference number: JC1444; MUID:93013037
                                                                                                                                                                                    A; Molecule type: protein
A; Residues: 18-41 < MA2>
A; Residues: 18-41 < MA2>
B; White; T. K.; 20h, Q; Fanzer, M.L.
B; White; T. K.; 20h, Q; Fanzer, M.L.
A; Title: Chan: 270, 15926-15929, 1995
A; Title: Chall surface calreticulin is a putative mannoside lectin which triggers mouse in A; Reference number: A57498; MUID: 95332280
A; Reference number: A57498
A; Reference number: A57498
A; Residues: Preliminary
A; Residues: 74-80;142-151;186-193 < WHI>
C; Superfamily: calreticulin
C; Reywords: calcium pinding
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                                                                                            A;ArcesHion: JC1444
A;Molecule type: mRNA
A;Hesidues: 1-416 CMAZ>
A;Cross-references: GB:M9298B; NID:g193084; PIDN:AAA37569.1; PID:g193085
A;AccesHion: PC1233
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C;Superfamily; calreticulin
C;Keywords: calcium binding
F:1-17/Domain: signal sequence *status predicted <SIG>
F:1-17/Domain: signal sequence *status experimental <MAT>
F:18-416/Product: calregulin *status experimental <MAT>
F:413-416/Region: endoplasmic reticulum retention signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
100.0%; Score 151; DB 1;
Best Local Similarity 100.0%; Pred. No. 3.6e-14;
Matches 27; Conservative 0; Mismatches 0;
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calreticulin precursor - human N;Alternate names: 52K ribonucleoprotein autoantigen Ro/SS-A; 60K integrin-binding pr C;Species: Homo sapiens (man) C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 18-Feb-2000 C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 18-Feb-2000 C;Accession: A42330; A37047; A46452; A28812; PH1525; A40346; S11475; T45075 R;McCauliffe, D.P.; Yang, Y.S.; Wilson, J.; Sontheimer, R.D.; Capra, J.D. A;Title: The S-flanking region of the human calreticulin gene shares homology with the A;Reference number: A42330; MUID:92129342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A Residues: Yr. 270-758, AAG' CLON>
A Residues: Yr. 270-758, AAG' CLON>
A Residues: Yr. 270-758, AAG' CLON>
A Residues: Radianted the protein as D-beta hydroxyburyrate dehydrogenase
A Roce: the authors designated the protein as D-beta hydroxyburyrate dehydrogenase
B YOKOL, T.; Nagayama, S.; Kajivara, R.; Kawaguchi, Y.; Horluchi, R.; Kamataki, T.
Biochim. Biophys. Acta 1158, 339-344, 1993
A Tille: Identification of protein disulfide isomerase and calreticulin as autoimmune
A; Reference number: S39371; MUID:94072621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N. Traves, S.; de Mattei, M.; Lanfredi, M.; Villa, A.; Green, N.M.; MacLennan, D.H.; M Blochem. J. 271, 473-480, 1990
A;Title: Calreticulin is a candidate for a calsequestrin-like function in Ca(2+)-stor A;Reference number: S13045; MUID:91054414
A; Experimental source: testis, strain Sprague-Dawley
R; Soennichsen, B.; Fuellekrug, J.; van Nguyen, P.; Diekmann, W.; Robinson, D.G.; Mies
submitted to the EMBL Data Library, May 1994
A; Description: Retention and retrieval: both mechanisms cooperate to maintain calret1
A; Reference number: $45036
A; Accession: $45036
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A;Realdues: 18-23, X'. 25-32 <VOK>
R;Van, P.N.; Peter, F.; Soeling, H.D.
J. Blol. Chem. 264, 17494-17501, 1989
A;Title: Four intracisternal calcium-binding glycoproteins from rat liver microsomes
it;ve calcium sequestering rat liver vesicles.
A;Reference number: A34473; MUID:90008920
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A,Residues: 1-416 <SOE>
A,Cross-references: RMBL.X79327; NID:g488840; PIDN:CAA55890.1; PID:g488841
R;Lone, Y.C.; Bailly, A.; Latruffe, N.
Rubmitted to the EMBL Data Library, December 1988
A;Reference number: S04867
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C; Keywords: calcium binding; glycoprotein
E;1-17/Domahn: signal sequence #status predicted <SIG>
F;18-416/Product: calreticulin #status experimental <MAT>
F;204-212/Region: unclear location signal
F;413-416/Region: endoplasmic reticulum retention signal
F;344/Binding site: carbohydrate (Asn) (covalent) #status predicted
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100.0%; Pred. No. 3.6e-14;
tive 0; Mismatches 0;
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                                                                  Query Match
Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Accession: S13047
                                                                                                                                     27;
                                                                                                                                     Matches
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A; Residues: 1-417 cAC2>
A; Note: sequence extracted from NCBI backbone (NCBIN:78837, NCBIP:78356)
B; Note: sequence extracted from NCBI backbone (NCBIN:78837, NCBIP:78356)
A; Ocin. Invest. 83, 1379-1391
A; Note: sequence extracted from NCBI backbone (NCBIN:78837, NCBIP:785.
A; Nclecular cloning: expression, and chromosome 19 localization of a human Ro/SS-A; Nclecular type: nRNA
A; Nclecular type: mRNA
A; Nclec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Molecule type: protein
A;Residues: 18-32 <KRA>
R;Lamerdin, J.; McCready, P.; Stilwagen, S.; Ramirez, M.; Carrano, A.
Submitted to the EMBL Data Library, November 1996
A;Description: Characterization by genomic sequence analysis of a gene-rich 111 kb regic
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A:Rollecule type: DNA
A:Rossdudes: 1-417 - CAMPA
A:Rossdudes: 1-417 - CAMPA
A:Cross-references: EMBL:AD000092; PIDN:AAB51176.1
A:Experimental source: cell line 5HL2-B; fibroblast
C:Comment: Autoantibodies specific for this protein are found in Sjogren's syndrome and C:Genetics:
A:Gene: GDB:CALR
A:Gross-references: GDB:125179; OMIM:109091
A:Aross-references: GDB:125179; OMIM:109091
A:Apterons: 31/1; 65/1; 133/1; 164/3; 234/3; 272/3; 320/3; 351/3
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A;Residues: 18-34,'R' <ROJ>
K;Residues: 18-34,'R' <ROJ>
K;Rizuse, K.H.: Simmerman, H.K.B.; Jones, L.R.; Campbell, K.P.
Biochem. J. 270, 545-548, 1990
A;Title: Sequence similarity of calreticulin with a Ca(2+)-binding protein that co-purif
A;Reference number: S11475; MUID:90380058
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C;Superfamily: calreticulin
C;Keywords: calcium binding; integrin binding
F;1-17/Domain: signal sequence #status predicted <SIG>
F;8414/7/Product: calreticulin #status predicted <MAT>
F;414-417/Region: endoplasmic reticulum retention signal
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A;Cross-references: GB:J05138; NID:g164858; PIDN:AAA31188.1; PID:g164859
R;Treves, S.; de Mattei, M.; Lanfredi, M.; Villa, A.; Green, N.M.; MacLennan, D.H.; M
Biochem. J. 271, 473-480, 1990
A;Title: Calreticulin is a candidate for a calsequestrin-like function in Ca(2+)-stor
A;Reference number: S13045; MUID:91054414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rifliegel, L.; Burns, K.; MacLennan, D.H.; Reithmeier, R.A.F.; Michalak, M. J. Biol. Chem. 264, 21522-21528, 1989
A; Hitle: Molecular cloning of the high affinity calcium-binding protein (calreticulin A; Reference number: A34154; MUID:900944320
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C; Date: 10-Dec-1993 #sequence_revision 23-Mar-1995 #text_change 13-Aug-1999
C; Date: 10-Dec-1999; S36799; S36800
B; Liu, N.; Fine, R.E.; Johnson, R.J.
Biochim. Biophys. Acta 1202, 70-76, 1993
A; Title: Comparison of CDNAs from bovine brain coding for two isoforms of calreticuli A; Reference number: S36799; MUID:93385184
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calreticulin precursor, skeletal muscle - rabbit
c; Species: Orrcolagus cuniculus (domestic rabbit)
C; Species: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999
C; Accession: A34154; S13047
C; Accession: A34154; Michalak, M.
                                                                   Gaps
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A; Cross-references: GB:L13462; NID:g348693; PIDN:AAC37307.1; PID:g348694
A; Experimental source: brain, clone 9.4
A; Accession: 336800
A; Molecule type: protein
A; Residues: 35-45 2.12>
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E;1-34/Domain: signal sequence #status predicted <SIG>
F;1-34/Domain: signal sequence #status predicted <MAT>
F;35-421/Product: calreticulin, brain isoform 2 #status predicted <MAT>
F;418-421/Region: endoplasmic reticulum retention signal
F;411-167/Disulfide bonds: #status predicted
F;183/Binding site: carbohydrate (Asn) (covalent) #status predicted
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   Length 417;
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                                                                   Indels
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100.0%; Pred. No. 3.6e-14;
iive 0; Mismatches 0;
Score 151; DB 1;
Pred. No. 3.6e-14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    calreticulin precursor, brain isoform 2 - bovine
                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  137 CGPGTKKVHVIFINYKGKNVLINKDIRC 163
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                                                                                                                                   1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
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F;1-17/Domain: signal sequence #status
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41K larval antigen - nematode (Onchocerca volvulus) (fragment)
C;Species: Onchocerca volvulus
A;Note: sequence extracted from NCBI backbone (NCBIN:128274, NCBIP:128275)
R;McCauliffe, D.P.; Zappi, E.; Lieu, T.S.; Michalak, M.; Sontheimer, R.D.; Capra, J.D J. Clin. Invest. 86, 332-335, 1990
A;Title: A human Ro/SS-A autoantigen is the homologue of calreticulin and is highly h A;Reference number: A37158; MUID:90307981
A;Accession: A37158
                                                                                                                                                                                                                                                                            A; Status: preliminary; nucleic acid sequence not shown; not compared with conceptual
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and expression in the liver of the frog,
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A; Residues: 1-419 cVAM-
A; Cross-references: EMBL:D78589; NID:g1514956; PIDN:BAA11425.1; PID:g1514957
C; Superfamily: calreticulin
C; Keywords: calculum
C; Keywords: calculum binding; endoplasmic reticulum
F; 1-18/Domain: signal sequence #status predicted cSIG>
F; 19-419/Product: calreticulin #status predicted cNAT>
F; 205-213/Region: nuclear location signal
F; 415-418/Region: endoplasmic reticulum retention signal
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C;Date: 29-Jan-1998 #sequence_revision 13-Feb-1998 #text_change 20-Jun-2000
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                                                                                                                                                                                                                                                                                                                 A; Molecule type: DNA
A; Residues: 91-105,'A',107,109-124;182-183,'L',185-220 <MCC>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C;Keywords: calcium binding; endoplasmic reticulum F;1-17/Domain: signal sequence #status predicted <SIG>F;403-406/Region: endoplasmic reticulum retention signal
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Pred. No. 1e-11;
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FEBS Lett. 387, 27-32, 1996
A;Title: Calnexin: its molecular cloning a
A;Reference number: S71342; MUID:96234004
A;Accession: S71343
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FlyBase: FBgn0005585
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88.9%;
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Best Local Similarity 88.9°
Matches 24; Conservative
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A; Residues: 1-336 <UNN>
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C.Species: Aplysia californica (california sea hare)
C.Species: Desperage sequence_revision 10-Sep-1999 *text_change 10-Sep-1999
C.Species: Annotation: JH0795; B31409; F66977
R.Kennedy, T.E.; Kuhl, D.; Barzilai, A.; Sweatt, J.D.; Kandel, E.R.
A.Titlu: Long-term sensitization training in aplysia leads to an increase in calreticult A.Reference number: JH0795; MUID: 93098937
A.Reference number: JH0795
A.Reference number: JH0795; MUID: 93098937
A.Residues: 1-405 < KEN-
A.Residues: 1-405 < KEN-
A.Residues: abdominal gandino and antral nervous system
R.Kennedy, T.E.; Gawinowicz, M.A.; Barzilai, A.; Kandel, E.R.; Sweatt, J.D.
Proc. Natl. Acad. Sci. U.S.A. 85, 7008-7012, 1988
A.Titlue: Sequencing of proteins from two-dimensional gels by using in situ digestion and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    calreticulin homolog precursor - fruit fly (Drosophila melanogaster)
N'Alternate names: Ro/SS-A autoantigen/calreticulin homolog
C; Bate: Il-Auq-1995 *sequence_revision Il-Auq-1995 *text_change I3-Aug-1999
C; Date: Il-Auq-1995 *sequence_revision II-Aug-1995 *text_change I3-Aug-1999
C; Date: Il-Auq-1995 *sequence_revision II-Aug-1995 *text_change I3-Aug-1999
R; Milth M.J.
DNA Seq: 3, 247-250, 1992
A; Title: Nucleotide sequence of a Drosophila melanogaster gene encoding a calreticulin law Reference number: A56637; MUID:93208374
A; Reference number: A56637
A; Status: preliminary
A; Multiple type: DNA
A; Cross-references: GB:X64461; NID:97685; PIDN:CAA45791.1; PID:97686
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A;Accession: B31409
A;Molecule type: protein
A;Molecule type: protein
A;Residues: 'X',17-28,'X',30-31 <KE2>
R;Sweutt, J.D.; Kennedy, T.E.; Wager-Smith, K.; Gawinowicz, M.A.; Barzilai, A.; Karl, K Electrophoresis 10, 152-157, 1989
A;Tile: Development of a database of amino acid sequences for proteins identified and A;Reference number: A60977; MUID:89276264
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                                                                                                                                      Gaps
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                                              Length 421;
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                                                                                                                                 Indels
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A.Molecule type: protain
A:Westdues: X',17-28, X',30-31 <SWE>
A:Westdues: X',17-28, X',30-31 <SWE>
C:Superfamily: caireticulin
C:Superfamily: caireticulin
C:Superfamil: state binding; endoplasmic reticulum
F;1-15,Domuln: status predicted <SIG>F;16-405,Product: caireticulin *status experimental <WAT>
F;402-405,Region: endoplasmic reticulum retention signal
                                     Score 151; DB 2;
Pred. No. 3.7e-14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     93.4%; Score 141; DB 1; 88.9%; Pred. No. 9.9e-13;
                                Ouery Match 100.0%; Score 151; E
Best Local Similarity 100.0%; Pred. No. 3.7
Matches 27; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      calreticulin precursor - California sea hare
                                                                                                                                                                                                                                                                       141 CGPGTKKVHVIFNYKGKNVLINKDIRC 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               133 CGPGTKKVHVIPNYKGKNILLVKKDIRC 159
                                                                                                                                                                                                                    1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
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Best Local Similarity 88.9
Matches 24; Conservative
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C;Species: Schistosoma mansoni
C;Date: 10.Sep-1999 #sequence_revision 10.Sep-1999 #text_change 10.Sep-1999
C;Accession: A48573
R;Khalife, J.; Trottein, F.; Schacht, A.M.; Godin, C.; Pierce, R.J.; Capron, A.
Mol. Biochem. Parasitol. 57, 193-202, 1993
A;Title: Cloning of the gene encoding a Schistosoma mansoni antigen homologous to hum
A;Reference number: A48573; MUID:93165070
A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA Seq. 2, 235-240, 1992
A;Title: A C. elegans gene encodes a protein homologous to mammalian calreticulin. A;Reference number: $25851; MUID:92329978
A;Accession: $25851
A;Accession: $25851
A;Status: preliminary
A;Molecule type: DNA
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A;Experimental source: strain Bristol N2; clone Y38A10A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  calreticulin precursor - Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Date: 06-Jan-1994 #sequence_revision 10-Nov-1995 #text_change 05-Nov-1999
C;Accession: S25851; T33996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Molecule Lype: mRNA
A; Residues: 1-393 < KHA>
A; Cross-references: GB:M93097; NID:g160928
A; Note: sequence inconsistent with the nucleotide translation
A; Note: sequence extracted from NCBI backbone (NCBIN:125085, NCBIP:125086)
                                                                                                                                                                                                                                                                calreticulin autoantigen homolog precursor - fluke (Schistosoma mansoni)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A.Cross-references: EMBL:X59589; NID:g6693; PIDN:CAA42159.1; PID:g6694 R;Bauer, C.; Courtney, L.; LaPlant, Y. submitted to the EMBL Data Library, February 1999 A;Description: The sequence of C. elegans cosmid Y38A10A. A;Reference number: Z21453 A;Accession: T33996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     74.2%; Score 112; DB 1; Length 393; 77.8%; Pred. No. 1.5e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
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F;1-15/Domain: signal sequence #status predicted <SIG>
F;392-395/Region: endoplasmic reticulum retention signal
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F;1-16/Domain: signal sequence #status predicted <SIG>
F;390-393/Region: endoplasmic reticulum retention signal
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A;Molecule type: DNA
A;Residues: 1-395 <BAU>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1; Mismatches
                                              135 CGMATKKVHVIFNYKGKNHLIKKEIPC 161
   27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
   1 CGPGTKKVHVIFNYKGKNVLINKDIRC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity 77.8
Matches 21; Conservative
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Matches 18; Conservative
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S29129
calreticulin precursor (clone 3) - African clawed frog (fragment)
C; Species: Xenopus laevis (African clawed frog)
C; Species: Xenopus laevis (African clawed frog)
C; Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 13-Aug-1999
C; Accession: 529129
R; Treves, S; Zorzato, F; Pozzan, T.
Biochem. J. 287, 579-581, 1992
A; Title: Identification of calreticulin isoforms in the central nervous system.
A; Reference number: S29129; MUID:93074997
A; Accession: 329129
A; Molecule type: mRNA
A; Residues: 1-411 - TRRE>
A; Cross-references: EMBL:X67597; NID:964608; PIDN:CAA47866.1; PID:964609
C; Superfamily: calreticulin
C; Keywords: 91ycoprotein
F; 1-12/Domain: signal sequence (fragment) #status predicted <SIG>F; 1-12/Domain: signal sequence (fragment) #status predicted <AMT>F; 400-411/Region: endoplasmic reticulum retention signal
F; 339/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Calreticulin (clone 8) - African clawed frog (fragment)
C;Species: Xenopus laevis (African clawed frog)
C;Species: Sep-1993 #sequence_revision 30-Sep-1993 #text_change 13-Aug-1999
C;Accession: S29130; T01068
R;Treves, S.; Zorzato, F.; Pozzan, T.
Biochem. J. 287, 579-581, 1992
A;Title: Identification of calreticulin isoforms in the central nervous system. A;Reference number: S29129; MUD:93074997
A;Accession: S29129; MUD:93074997
A;Accession: S29129; MUD:93074997
A;Residues: 1-384 4TRE>
A;Cross-references: EMBL.X67598
A;Accession: T01068
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A;Accession: T01068
A;Accession: Close A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 384;
                                                                                                             Length 336;
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                                          Score 121; DB 2; Lend
---d. No. 6.5e-10;
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Pred. No. 1e-09;
1; Mismatches
                                                                                                                                                Pred. No. 6.56
3; Mismatches
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                                                                                                                                                                                                                                                             1 CGPGTKKVHVIFNYKGKNVLINKDIRC 27
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                                                                                                         Query Match 80.1%;
Best Local Similarity 77.8%;
Matches 21; Conservative
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Best Local Similarity 81.5%;
Matches 22; Conservative
C; Superfamily: calreticulin
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RESULT 15
T14554
cualreticulin - beet
C.Spreises Beta vulgaris (beet)
C.Spreises 20-Sep-1999 #sequence_revision 20-Sep-1999 #text_change 20-Jun-2000
C.Spreises T14554
A.Spreises, R. William V. William Sugar beet calreticulin.
A.Spreises preliminary; translated from GB/EMBL/DDBJ
A.Spreises preliminary; translated from GB/EMBL/DDBJ
A.Spreises preliminary; translated from GB/EMBL/DDBJ
A.Superises 1-416 < VIE>
A.Screas-references EMBL.AJ002057
A.Streas-references EMBL.AJ002057
C.Superismily: calreticulin
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Search completed: January 9, 2002, 15:02:03 Job time: 190 sec

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us-09-828-000-4.rsp

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GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd.
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OM protein - protein search, using sw model

January 9, 2002, 15:12:14 ; Search time 25.18 Seconds (without alignments) 88.823 Million cell updates/sec Run on:

US-09-828-000-4 340 1 TDMHGDSEYNIMFGPDICGP.....IRCKDDEFTHL/YTLIVRPDN 61 Title: Perfect score: Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

100059 segs, 36664827 residues Searched:

100059 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

SwissProt_39:* Database : Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description	7977		P14211 mus musculu		P15253 oryctolagus		P29413 drosophila	_	Q06814 schistosoma	-	Q9std3 chlamydomon	_	Q9xf98 prunus arme		Q38858 arabidopsis							Q9zny3 euglena gra	Q9sp22 zea mays (m			P35564 mus musculu	P35565 rattus norv		P29402 arabidopsis	Q39994 helianthus		82709 pis	P52194 mus musculu
SUMMARIES	ID	CRTC_HUMAN	CRT1_BOVIN	CRTC_MOUSE	CRTC_RAT	CRTC_RABIT	CRT2_BOVIN	CRTC_DROME	RAL1_ONCVO	CRTC_SCHMA	CRTC_CAEEL	CRTC_CHLRE	CRTC_BETVU	CRTC_PRUAR	CRTC_RICCO	CRT2_ARATH	CRT1_ARATH	CRTC_DICDI	CRTC_ORYSA	CRT3_ARATH	CRTC_NICPL	CRTC_BERST	CRTC_EUGGR	CRTC_MAIZE	CALX_SOYBN	CALX_HUMAN	CALX_MOUSE	CALX_RAT	CALX_CANFA	CAX1_ARATH	CALX_HELTU	CALX_CAEEL	CALX_PEA	CALG_MOUSE
	Length DB				16	18	21	90	88	93		20	16	21	15	24		24	24	24	16	16	01	50	46	92	91	91	93		40		551 1	
ď	Query Match L			98.5			٠		٠	•	68.7		6.09				58.5				56.2									₹.	4	4	33.1	ij.
	Score	34(335	335	335	335	335	293	261		233.5	220	202	204	202	202	199	195	195	194	191		177.5	163	$^{\sim}$	121.5	\sim	\sim	N				112.5	
	Result No.	1	7	က	4	S	9	7	ω .	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33

Q38798 arabidopsis O14967 homo sapien								Ħ	
CAX2_ARATH CALG_HUMAN	CALX_SCHPO	YECO_YEAST	RPB1_TRYBB	RPB2_TRYBB	YN98_YEAST	CALX_YEAST	YME9_YEAST	RIP1_MOMCH	NUSA_BUCAI
7			Н	Н	Н	Н	-	Н	Н
528 610	560	260	1766	1766	489	502	1361	286	496
31.0	30.3	19.4	19.0	19.0	18.7	18.7	17.4	17.1	17.1
105.5	103	99	64.5	64.5	63.5	63.5	59	28	28
34 35	36	38	39	40	41	42	43	44	45

ALIGNMENTS

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DISULFID
                                                                                                                                                                   SEQUENCE
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                                                                                                                                                CONFLICT
                                                     REPEAT
REPEAT
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DOMAIN
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CRT1_BOVIN
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                                                                                                                                                                                                                                                                                                                                                                                                                  Hochstrasser D.F., Frutiger S., Paquet N., Bairoch A., Ravier F., Pauquali C., Sanchez J.-C., Tissot J.-D., Bjellqvist B., Vargas R., Appel R.D., Hughes G.J., Hughes G.J., Human liver protein map: a reference database established by microsequencing and gel comparison."; Riectrophoresis 13:992-1001(1992).
                                                                                                                                                                                                                                                                                                                           "Mincerezonance of 145 proteins recorded in the two-dimensional gel
protein database of normal human epidermal keratinocytes.";
Electrophoresis 13:960-969(1992).
                                                                                                                                                                                                                                                        TISSUK-Keratinocytes;
MKDLINE-93162043; PubMed 1286667;
Kasmusson H.H., van Damme J., Puype M., Gesser B., Celis J.E.,
Vandekerckhove J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
Ptum; PP00262; Calreticulin; 1.
Priona; P0001866; Calreticulin; 1.
PROSITE; PS00014; ER_TREGET; 1.
PROSITE; PS00804; CALRETICULIN, 1.
PROSITE; PS00804; CALRETICULIN_1; 1.
PROSITE; PS00806; CALRETICULIN_2; 1.
PROSITE; PS00806; CALRETICULIN_2; 1.
PROSITE; PS00806; CALRETICULIN_2; 1.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal.
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N-DOMAIN.
P-DOMAIN.
C-DOMAIN.
4 X APPROXIMATE REPEATS.
1-1.
1-2.
                                                                                                                                                                                                                                     PARTIAL SEQUENCE OF 25-34; 56-62; 208-221 AND 273-278
                                                                                     MEDLINE -93162045; Pubmed 1286669;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SWISS-2DPAGE; P27797; HUMAN.
Aurhus/Ghent-2DPAGE; 9401; IEF.
HSC-2DPAGE; P27797; HUMAN.
MIM; 109091;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; AD000092; AAB51176.1; -. PIR; A37047; A37047. PIR; S11475; S11475. PIR; A42330; A42330. PIR; A46452; A46452.
                 Blochem. J. 270:545-548(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; M84739; AAA51916.1; -.
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2202
2202
231
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                                                   SKOUENCE OF 18-28.
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cells.";
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REPEAT
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                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                  Bos taurus (Bovine).

Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
Bovidae; Bovinae; Bos.

NCBI_TaxID-9913;
                                                                                                                                                             1 TOMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPD
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Endoplasmic reticulum; Calcium-binding; Repeat; Glycoprotein.
DOMAIN
                                                                                                                      Length 417;
                                                                                                                                                                                                                                                                                          01-OCT-1996 (Rel. 34, Created)
01-OCT-1996 (Rel. 34, Last sequence update)
01-OCT-1996 (Rel. 34, Last annotation update)
CALRETICULIN, BRAIN ISOFORM 1 (CRPS5) (CALREGULIN) (HACBP).
                                                                                                                                           0; Indels
                                                          BY SIMILARITY.
PREVENT SECRETION FROM ER.
                                                                               MISSING (IN REF. 3).
BC37C3C0F1054FB2 CRC64;
 1-4.
3 X APPROXIMATE REPEATS.
2-1.
2-2.
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                                                                                                                      Score 340; DB 1;
Pred. No. 3.4e-34;
                                                 ASP/GLU/LYS-RICH.
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                                                                                                              100.0%; Scc...
100.0%; Pred. No. ...
0; Mismatches
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P-DOMAIN.
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                                                                                        48141 MW;
                                                                                                                                           61; Conservative
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 255
297
269
283
283
297
408
417
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259
259
273
287
351
137
414
417 AA;
                                                                                                                     Query Match
Best Local Similarity
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P52193;
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SIGNAL
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                                                                                                                                                                                                       103 TDMHGDSEYNIMFGPDICGPGTKKVHVIFNYKCKNVLINKDIRCKDDEFTHLYTLIVRPN 162
                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDIINE-93013037; PubMed-1398135;
Mazzarella R.A., Gold P., Cunningham M., Green M.;
"Determination of the sequence of an expressible cDNA clone encoding
ERp60/calregulin by the use of a novel nested set method.";
Gene 120:217-225(1992).
                                                                                                                                                                                 1 TDMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPD 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A., AND SEQUENCE OF 18-48 AND 129-161.
STRAIN-BALB/C; TISSUE-Liver;
MEDLINE-90059955; PubMed-2583110;
Smith M.J., Koch G.L.E.;
"Multiple zones in the sequence of calreticulin (CRP55, calregulin, HACBP), a major calcium binding ER/SR protein.";
EMBO J. 8:3581-3586(1989).
                     N-LINKED (GLCNAC. ..).
PREVENT SECRETION FROM ER (POTENTIAL).
7D4B68DFC689EEFI CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-JAN-1990 (Rel. 13, Last sequence update)
15-DEC-1998 (Rel. 37, Last annotation update)
CALRETICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP) (ERP60).
                                                                                                          Length 400;
                                                                                                        98.5%; Score 335; DB 1; 98.4%; Pred. No. 1.3e-33; iive 1; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                              416 AA
                                                                                                                                                                                                                                                                                                                                                                                              PRT;
 146
162 N-
400 PF
46381 MW;
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Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; X14926; CAA33053.1; -. EMBL; M92988; AAA37569.1; -.
                                                                                                        Query Match 98.5
Best Local Similarity 98.4
Matches 60; Conservative
                                                                                                                                                                                                                                                                                                                                                                                              STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus (Mouse).
120
162
397
400 AA;
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JC1444; JC1444.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                  01-JAN-1990
                                                                                                                                                                                                                                                                                        N 163
                                                                                                                                                                                                                                                                                                                                                                                            CRTC_MOUSE
P14211;
                                                                                                                                                                                                                                                          N 61
                   CARBOHYD
                                                     SEQUENCE
 DISULFID
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121 DMHGDSEYNIMFGPDICGPGTKKVHVIENYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 180
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Exp. Cell Res. 205:101-110(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Métazoa; Chórdata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 DMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 61
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MEDLINE-93202172; Pubbked-8453984;
Nakamura M., Moriya M., Baba T., Michikawa Y., Yamanobe T., Arai K.,
Okinaga S., Kobayashi T.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-MAR-1989 (Rel. 10, Created)
01-NOV-1990 (Rel. 16, Last sequence update)
01-NOV-1997 (Rel. 35, Last annotation update)
01-NOV-1997 (Rel. 35, Last annotation update)
CALRETICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP) (CALGIUM-BINDING PROTEIN 3) (CABP3).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "Structural homology between the rat calreticulin gene product and the Onchocerca volvulus antigen Ral-1.";
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0
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STRAIN-SPRACHS-90370496; PubMed=2395661;
MULTHY K.K., Banville D., Srikant C.B., Carrier F., Bell A., Holmes C., Patel Y.C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       98.5%; Score 335; DB 1; Length 416; 100.0%; Pred. No. 1.4e-33; Live 0; Mismatches 0; Indels
                                                                                                                                                                                                                        Endoplasmic reticulum; Calcium-binding; Repeat; Signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PREVENT SECRETION FROM ER. 24C03B0091340BDB CRC64;
                                                                                                                                                                                                                                                                                                                           C-DOMAIN.
4 X APPROXIMATE REPEATS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          3 X APPROXIMATE REPEATS
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BY SIMILARITY.
               MGD; MGI:88252; Calr.
InterPro: IPR001580; Calreticulin.
InterPro: IPR001580; Calreticulin.
PRINTS: PR00262; Calreticulin; 1.
PRINTS: PR00626; Calreticulin; 1.
PRODOM: PD001866; Calreticulin; 1.
PROSITE; PS00014; ER_TARGET; 1.
PROSITE; PS00803; CALRETICULIN_2: 1.
PROSITE; PS00803; CALRETICULIN_2: 1.
PROSITE; PS00809; CALRETICULIN_2: 1.
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                                                                                                                                                                                                                                                                  CALRETICULIN.
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P-DOMAIN.
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Μ
SWISS-2DPAGE; P14211; MOUSE
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                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 60; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          416 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               [2]
SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                   18
198
3309
191
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227
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01-MAR-1989 (Re
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DISULFID
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Biochem.
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                                          SIGNAL
                                                                                DOMAIN
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    NAME OF THE PARTY 
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                                                                                                                                                                                                                                                                                                                      Treves S., de Mattel M., Lanfredi M., Villa A., Green N.M., Maclennan D.H., Meldolesi J., Pozzan T.; Calreticulin is a candidate for a calsequestrin-like function in Cu2(+)-storage compartments (calciosomes) of liver and brain."; Biochom. J. 271:473-480(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRAIN SPRAGUE-DAWLEY; TISSUE Liver;
MEDLINE-9181573; PubMed 7876339;
Socunitaben B., Fuellekrug J., van Nguyen P., Diekmann W.,
Robinson D.G., Mieskos G.;
"Retention and retrieval: both mechanisms cooperate to maintain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE OF 18-32.
STRAIN LEC: TISSUE Liver;
MEDILINE 94072621: Pubmed 8251535;
YOKOI T., Nagayama S., Kajiwara R., Kawaguchi Y., Horiuchi R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRAIN-SPRAGUE-DAWLEY; TISSUE Testis;
MEDIALE-92360010; Plubmed-1497655;
MARABULA M. MICHEWA Y., Baba T., Okinaga S., Aral K.;
"Culreticulin is present in the acrosome of spermatids of rat
                                                                                                                                                                                                             STRAIN SPRAGUE-DAWLEY;
Lone Y.C., Bailly A., Latruffe N.;
Submitted (DEC-1988) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Biochem. Biophys. Res. Commun. 186:668-673(1992)
                                                                                                                                     calreticulin in the endoplasmic reticulum.";
J. Cell Sci. 107:2705-2717(1994).
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PRODDM; PD001866; CALTCALULIN; 1.
PROSITE; PS00014; PR.TARGET; 1.
PROSITE; PS00803; CALRETICULIN.1; 1.
PROSITE; PS00804; CALRETICULIN.2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         D78308; BAA11345.1; -. X53363; CAA37446.1; -. X13702; CAA31987.1; ALT_SEQ. X79327; CAA55890.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
Pfam; PF00262; calreticulin; 1.
                                                                                                                                                                                                                                                                                                                MEDLINE-91054414; PubMed:2241926;
                                                                                                                                                                                             SEQUENCE OF 270-358 FROM N.A.
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PIR; JH0819; JH0819
                    SEQUENCE FROM N.A
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PIR;
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SEQUENCE FROM N.A.
TISSUES.Alow-twitch skeletal muscle;
MEDIME-90094120; pubMed-2600080;
Fliegel L., Burns K., Maclennan D.H., Reithmeier R.A.F., Michalak M.;
"Modecular cloning of the high affinity calcium-binding protein
(Calreticulin) of skeletal muscle sarcoplasmic reticulum.";
J. Biol. Chem. 264:21522-21528(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Oryctolagus cuniculus (Rabbit).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.
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TISSUE-Fast-twitch skeletal muscle;
MEDLINE-91282795; PubMed=2059224;
Fliegel L., Michalak M.;
"Fast-twitch and slow-twitch skeletal muscles express the same isoform of calreticulin.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE OF 18-46.
MEDLINE-91201375; PubMed-2016321;
Milner R.E., Bakeh S., Shemanko C., Carpenter M.R., Smillie Vance J.E., Opas M., Michalak M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-APR-1990 (Rel. 14, Last sequence update)
01-OCT-1996 (Rel. 34, Last annotation update)
CALRETICULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP) (ERP60)
                                                                                                                                                                                                                                                                                                                                                                                                                  Length 416;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Indels
                   Calcium-binding; Repeat; Signal
                                                                                                                                                                                                                                                                                                                                      PREVENT SECRETION FROM ER. 2E6713CED31A2970 CRC64;
                                                                                                                                4 X APPROXIMATE REPEATS.
                                                                                                                                                                                                                            X APPROXIMATE REPEATS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Biophys. Res. Commun. 177:979-984(1991)
                                                                                                                                                                                                                                                                                                                                                                                                                  Score 335; DB 1;
Pred. No. 1.4e-33;
                                                                                                                                                                                                                                                                                                   ASP/GLU/LYS-RICH.
                                                                                                                                                                                                                                                                                                                                                                                                  98.5%; Sco...
100.0%; Pred. No. ...
0; Mismatches
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                                                        CALRETICULIN.
 CALRETICULIN_REPEAT; 3.
                                                                          N-DOMAIN
                                                                                           P-DOMAIN.
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   JOSOS,
reticulum; (
                                                                      Query Match
Best Local Similarity
Matches 60; Conserv
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PS00805;
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198
3309
3309
191
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227
227
244
259
                   Endoplasmic
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P15253;
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                                                                 TISSUE-Lung;

MEDLINE-92002038; PubMed-1911780;

Guan S., Falick A.M., Williams D.E., Cashman J.R.;

Guan S., Falick A.M., Williams D.E., Cashman J.R.;

Evidence for complex formation between rabbit lung flavin-containing monoxygenase and calreticulin.";

Biochemistry 30:982-9900(1991).

I-FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM-BINDING SITES.

I-SUBUNIT: MONOMER (BY SIMILARITY).

I-SUBUNIT: MONOMER (BY SIMILARITY).

I-SUBCELLUIAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.

I-SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
"Calreticulin, and not calsequestrin, is the major calcium binding protein of smooth muscle sarcoplasmic reticulum and liver endoplasmic
                                                                                                                                                                                                                                                                                                                                   ASP/GLU/LYS-RICH.
BY SIMILARITY.
PREVENT SECRETION FROM ER.
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B6082B689DC763A6 CRC64;
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C-DOMAIN.
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                                 Biol. Chem. 266:7155-7165(1991).
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308
418
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                                                        PARTIAL SEQUENCE.
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191
191
                        reticulum.
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DISULFID
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Length 418;
98.5%; Score 335; DB 1; Length 41 100.0%; Pred. No. 1.4e-33; ive 0; Mismatches 0; Indels
Query Match 98.5
Best Local Similarity 100.
Matches 60; Conservative
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                                                  01-NOV-1995 (Rel. 32, Last sequence update)
15-JUL-1998 (Rel. 36, Last annotation update)
CALRETICULIN, BRAIN ISOFORM 2 PRECURSOR (CRP55) (CALREGULIN) (HACBP).
                                                                                              Bos taurus (Bovine).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                               Biochim. Biophys. Acta 1202:70-76(1993).
-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM-BINDING SITES.
-!- SUBUNIT: MONOMER (BY SIMILARITY).
-!- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SUMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                          Liu N., Fine R.E., Johnson R.J.; "Comparison of cDNAs from bovine brain coding for two isoforms of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N-LINKED (GLCNAC. . .) (POTENTIAL).
PREVENT SECRETION FROM ER.
0257E959F71528BC CRC64;
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Pred. No. 1.4e-33;
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BY SIMITAPT
             421 AA
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Pr00262; Calreticulin; 1.
Pr0Dom; PF00626; Calreticulin; 1.
PROSITE; PS00014; ER_TARGET; 1.
PROSITE; PS00803; CALRETICULIN; 1, 1.
PROSITE; PS00804; CALRETICULIN, 2; 1.
PROSITE; PS00804; CALRETICULIN, 2; 1.
PROSITE; PS00805; CALRETICULIN, 2; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro, IPR001580, Calreticulin.
InterPro, IPR000886; ER_target.
                                                                                                                                                                                                           MEDLINE=93385184; PubMed=8373827;
                                       (Rel. 32, Created)
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98.4%;
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Best Local Similarity 98.4'
              STANDARD;
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SIGNAL 1 34
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201
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                                                                                                                                                     NCBI_TaxID=9913;
                                                                                                                                                                                                                                                       calreticulin.";
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                                       01-NOV-1995 (
01-NOV-1995 (
15-JUL-1998 (
           CRT2_BOVIN
P42918;
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DISULFID
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                                                                                                                                                                                                                                                                                                                                                                                                                                                 CALMETICULIA
CRC OK CG9429.
DROBOPALLA melanogaster (Fruit fly).
Brkaryota: Metazoa; Arthropoda; Trachesta; Hexapoda; Insecta;
Eukaryota: Meoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
                    124 TDMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPN 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nucleotide sequence of a Drosophila melanogaster gene encoding a warreticulin homologue.";
                                                                                                                                                                                                                                                                                                  CRTC_DROME STANDARD; PRT; 406 AA. P29413; Q9VRA3; 01-APR-1993 (Rel. 25, Created) 01-OCT-1993 (Rel. 27, Last sequence update) 20-AUG-2001 (Rel. 40, Last annotation update) CALRETCULIN PRECURSOR (CRP55) (CALREGULIN) (HACBP).
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MEDLINE-93208374; PubMed:1296819;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 culreticulin homologue."
DNA Seq. 3:247-250(1992)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A. STRAIN-BERKELEY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Smith M.J.;
                                                                                                                                                             184 N 184
                                                                                                        61 N 61
                                                                                                                                                                                                                                                                        CHTC_DROME
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         120 TDMHGESPYEIMFGPDICGPGTKKVHVIFSYKGKNHLISKDIRCKDDVYTHFYTLIVRPD 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 TDMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPD 60
                                                                                                 "A human Ro/SS-A autoantigen is the homologue of calreticulin and is highly homologous with onchocercal RAL-1 antigen and an aplysia memory molecule".":
SEQUENCE OF 91-124 AND 182-220.
MEDLINE-90307981; PubMed-2365822;
McCauliffe D.P., Zappl E., Lieu T.S., Michalak M., Sontheimer R.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A. MEDLINE=94341871; PubMed~7520419; Rokeach L.A., Zimmerman P.A., Unnasch T.R.; "Epitopes of the Onchocerca volvulus RAL1 antigen, a member of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Nematoda; Chromadorea; Spirurida; Filarioidea;
Onchoceroidae; Onchocerca.
NCBI_TaxID:•6282;
                                                                                                                                             'memory molecule',";
J. Clin. Invest. 86:332-335(1990).
-!- CUTOLION: THERE ARE BOTH HIGH AND
LOW AFFINITY CALCIUM-BINDING SITES.
-!- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 293; DB 1; Length 406; Pred. No. 1.8e-28; 1; Mismatches 5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROSITE; PSOUGOS; CALRETICULIN_2; ...
PROSITE; PSOUGOS; CALRETICULIN_2: 1.
PROSITE; PSOUGOS; CALRETICULIN_REPEAT; 3.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              406 CALRETICULIN.
107 G -> A (IN REF. 3).
184 V -> L (IN REF. 3).
46808 MW, 65D72C69D08EC427 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-JUL-1989 (Rel. 11, Created)
01-NOV-1995 (Rel. 32, Last sequence update)
01-NOY-1996 (Rel. 34, Last annotation update)
RAL-1 PROTEIN PRECURSOR (41 KDA LARVAL ANTIGEN).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      86.2%; Score ... 1.8e-/
85.2%; Pred. No. 1.8e-/
...ive 4; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PROSITE; PS00014; ER_TARGET; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PIR: A37158; A37158.
FlyBase; FBqn0005585; Crc.
InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pfam; PF00262; calreticulin; 1. PRNINS; PR00626; CALRETICULIN. PRODOM; PD001866; Calreticulin; 1. PROSITE; PS00014; ER_TARGET; 1.
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Best Local Similarity 85.28
Matches 52, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
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406 AA;
                                                                             Capra J.D.;
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P11012;
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Khalife J., Trottein F., Schacht A.-M., Godin C., Pierce R.J.,
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CONFLICT
SEQUENCE
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REPEAT
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                                                                                                                                      This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation-the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@ib.ch).
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                                             SEQUENCE OF 53-388 FROM N.A.
MEDLINE=88273584; PubMed=2455736;
Unnasch T.R., Gallin M.Y., Soboslay P.T., Erttmann K.D., Greene B.M.;
"Isolation and characterization of expression cDNA clones encoding
antigens of Onchocerca volvulus infective larvae.";
J. Clin. Invest. 82:262-269(1988).
-1- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 DMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 61
calreticulin family of proteins, recognized by sera from patients with onchocerciasis.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Platyhelminthes; Turbellarian Platyhelminths;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rhabditophora; Eulecithophora; Revertospermata; Mediofusata;
Neodermata; Trematoda; Digenea; Strigeidida; Schistosomatoidea;
Schistosomatidae; Schistosoma.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 388;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9537F298A2D31CD6 CRC64;
                                                                                                                                                                                                                                                                                                                                                           RAL-1 PROTEIN.
4 X APPROXIMATE REPEATS
                                                                                                                                                                                                                                                                                                                                                                                                                              X APPROXIMATE REPEATS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ARG/LYS-RICH (BASIC).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 76.8%; Score 261; DB 1; Le Best Local Similarity 76.7%; Pred. No. 1.4e-24; Matches 46; Conservative 6; Mismatches 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CRTC_SCHMA STANDARD; PRT; 393 AA. 006814, 026562; Created) 01-UNY-1994 (Rel. 33, Last sequence update) 01-FEB-1996 (Rel. 33, Last sequence update) 01-NOY-1997 (Rel. 35, Last annotation update) CALRETICULIN PRECURSOR (SM4 PROTEIN) Schistosoma mansoni (Blood fluke).
                                                                                                                                                                                                                                         PIR; A22507; A32507.

InterPro; IPR001580; Calreticulin.
Prims; PR00262; Calreticulin; 1.
PRINTS; PR00626; CALRETICULIN.
PRODOM; PD001866; Calreticulin; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPART; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SIMILARITY
                                                                                                                                                                                                                                                                                                                          PROSITE; PS00805; CALRETICULIN_REPEAT; 3.
Calcium-binding; Repeat; Antigen; Signal.
SIGNAL 17
                          Infect. Immun. 62:3696-3704(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
STRAIN-PUERTO RICAN;
MEDLINE-93165070; Pubmed-8433712;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MW.
                                                                                                                                                                                                                                  EMBL; M20565; AAA59056.1; -.
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253
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SEQUENCE
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InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
PRINTS; PR00626; Calreticulin; 1.
PRINTS; PR00626; Calreticulin; 1.
PROSITE; PS00014; ER_TARGET; 1.
PROSITE; PS00804; CALRETICULIN. 1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS008063; CALRETICULIN_2; 1.
PROSITE; PS008065; CALRETICULIN_2; 1.
PROSITE; PS008065; CALRETICULIN_REPEAT; 1.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal; Glycoprotein.
SIGNAL
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                                                                                                                                                                                                                                  Mol. Biochem. Parasitol. 62:313-315(1993).
-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND
LOW AFFINITY CALCIUM-BINDING SITES.
-!- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                     [2]
SEQUENCE FROM N.A.
STRAIN=PUERTO RICAN;
MEDLINE=94187805; PubMed=8139623;
Khallfe J., Pierce R.J., Godin C., Capron A.;
Cloning and sequencing of the gene encoding Schistosoma mansoni calreticulin.;
Mol. Biochem. Parasitol. 62:313-315(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N-LINKED (GLCNAC. . .) (POTENTIAL)
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'Cloning of the gene encoding a Schistosoma mansoni antigen
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4 X 12 AA APPROXIMATE REPEATS.
11-1.
1-2.
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3 X 11 AA APPROXIMATE REPEATS
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PREVENT SECRETION FROM ER
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45F59857C21940D2 CRC64;
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MISSING (IN REF. 2).
Y -> D (IN REF. 2).
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Pred. No. 2.9e-22;
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                        homologous to human Ro/SS-A autoantigen.";
Mol. Biochem. Parasitol. 57:193-202(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     395
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77.6%;
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EMBL; L24159; AAA19024.1;
HSSP; P00268; 4RXN.
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Best Local Similarity
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                                                                                                                                                                                                                                                                                       reinhardtii calreticulin.";
Submitted (OCT-1997) to the EMBL/GenBank/DDBJ databases.
-!-FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND
LOW AFFINITY CALCIUM-BINDING SITES (BY SIMILARITY).
-!- SUBCELLULAR LOCATION: EMDOPLASMIC RETICULUM LUMEN (BY SIMILARITY).
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PREVENT SECRETION FROM ER (POTENTIAL). DD3BA3AFFBF61C9B CRC64;
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Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyladons; core eudicots; Caryophylidae; Caryophyllalae; Chenopodiaceae; Beta.

NCBI_TaxID-3555;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Chlamydomonas reinhardtii.
Eukaryota; Viridiplantae; Chlorophyta; Chlorophyceae; Volvocales;
Chlamydomonadaceae; Chlamydomonas.
                                                                                                                                                                                                                                                 Zuppini A., Kaydamov C.;
"Cloning and characterization of a cDNA encoding Chlamydomonas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5 GDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROSITE; PS00805; CALRETICULIN_REPEAT; 1.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal.
                   20-AUG-2001 (Rel. 40, Created)
20-AUG-2001 (Rel. 40, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
CALRETICULIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20-AUG-2001 (Rel. 40, Last sequence update) 20-AUG-2001 (Rel. 40, Last annotation update) CALRETICULIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    416 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CALRETICULIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pfam; PF00262; calreticulin; 1.
PRINTS; PR00626; CALRETICULIN.
ProDom; PD001866; CALRETICULIN.
PROSTIE; PS00014; ER_TARGET; 1.
PROSTIE; PS00803; CALRETICULIN_1; 1.
PROSTIE; PS00804; CALRETICULIN_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; AJ000765; CAB54526.1; -
InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20-AUG-2001 (Rel. 40, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        47327 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
STRAIN VV - D/ZR5; TISSUE · Leaf;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
Local 37; Conserve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          420 AA;
                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                       NCBI_TaxID=3055;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19
                                                                                                                                                                                                                                STRAIN=137C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CRTC_BETVU
O81919;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CRTC_BETVU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q
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                                                                                                                                                                                                                                                                                                                                                                                                                             This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation-the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@lsb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazou; Nematoda; Chromadorea; Rhabditida; Rhabditoldea;
Rhabditidae; Peloderinae; Caenorhabditis.
NCHI_TaxID-6239;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 DMHGDSEYNIMFGPDICGPGTKKVHVIPNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 61
                                                                                                                                                                                                                                                                                                        DNA Seq. 2:335-240(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ï
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 395;
                                                                                                                                                                                                                                                                    "A.C. elegans gene encodes a protein homologous to mammalian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro; IPR001580; Calreticulin.
InterPro; IPR001580; Calreticulin.
InterPro; IPR000866; RR_target.
Pfam; PF00362; Calreticulin; 1.
PROSTE; PS0001865; Calreticulin; 1.
PROSTE; PS00014; ER_TARGET; 1.
PROSTE; PS008004; CALRETICULIN_1; 1.
PROSTE; PS008005; CALRETICULIN_2; 1.
PROSTE; PS00805; CALRETICULIN_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BY SIMILARITY.
PREVENT SECRETION FROM ER.
35CA7D2EC1D56B03 CRC64;
                                                                                                                                                                                                                                                                                                                                              LOW AFFINITY CALCIUM BINDING SITES.

1. SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.

1. SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     X APPROXIMATE REPEATS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       X APPROXIMATE REPEATS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 233.5; DB 1
Pred. No. 3.26-21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ASP/GLU/LYS-RICH.
01-AUG-1992 (Rel. 23, Last sequence update)
01-FEB-1994 (Rel. 28, Last annotation update)
CALRETICULIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CALRETICULIN.
N-DOMAIN.
P-DOMAIN.
C-DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  POTENTIAL.
                                                                                                                                                                                                         STRAIN-BRISTOL N2;
MEDLINE-92329978; Pubmed-1627827;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 45616 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        68.7%;
68.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; X59589; CAA42159.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hest Local Similarity 68.3
Matches 41; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   395
301
395
395
197
                                                                                  Caenorhubditis elegans.
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264
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395 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S25851; S25851
                                                                                                                                                                                      SEQUENCE PROM N.A.
                                                                                                                                                                                                                                                                                         calreticulin.
                                                                                                                                                                                                                                                 Smith M.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
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Gaps

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REPEAT REPRAT REPEAT REPEAT REPRAT

REPEAT REPEAT

61

"Nucleotide sequence from sugar beet calreticulin.";

Viereck R.

420 AA

PRT;

STANDARD;

CRTC_CHLRE

CRTC_CHLRE RESULT. a

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communis L.
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P93508;
                                                                                                                                                                                                                                                                                CARBOHYD
                                                                                                                                                                                                                                                                                                  CARBOHYD
                                                                                                                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                               SIGNAL
                                                                                                                                                                                                                                                                 CHAIN
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                                                                                                                                                                                                                                                                                                                   SITE
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                -!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW AFFINITY CALCIUM-BINDING SITES (BY SIMILARITY).
-!- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN (BY SIMILARITY).
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    apricot (Prunus armeniaca cv. Bergeron).";
Submitted (MAR-1999) to the EMBL/GenBank/DDBJ databases.
--- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND
LOW AFFINITY CALCIUM-BINDING SITES (BY SIMILARITY).
--- SUBCELLULAR LOCCATION: BENOPLASMIC RETICULUM LUMEN (BY SIMILARITY).
--- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                     EMBL; AJ002057; CAA05161.1; -...
Mendel; 32549; Betvu;1166;32549.
InterPro; IPR001580; Calreticulin.
InterPro; IPR001880; Calreticulin.
Pfam; PF00262; Calreticulin; 1...
Propon; PR001866; Calreticulin; 1...
PROSITE; PS00004; ER_ARGET; 1...
PROSITE; PS00804; CALRETICULIN_1; 1...
PROSITE; PS00806; CALRETICULIN_2; 1...
PROSITE; PS00806; CALRETICULIN_2; 1...
PROSITE; PS00806; CALRETICULIN_2; 1...
PROSITE; PS00806; CALRETICULIN_A; 1...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CALRETICULIN PRECURSOR.
Prunus armeniaca (Apricot).
Bukaryota: Viridiplantae: Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta: Magnoliophyta; eudicotyledons; core eudicots; Rosidae;
eurosids I; Rosales; Rosaceae; Prunus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N-LINKED (GLCNAC. . .) (POTENTIAL).
N-LINKED (GLCNAC. . .) (POTENTIAL).
PREVENT SECRETION FROM ER (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
STRAIN-CV. BERGERON; TISSUE-Mesocarp, and Endocarp;
Mbeguie-A-Mbeguie D., Fils-Lycaon B.R.;
"Molecular cloning and nucleotide sequence of a calreticulin from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5 GDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPD 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60.9%; Score 207; DB 1; Length 416; 64.3%; Pred. No. 5.9e-18; Live 7; Mismatches 13; Indels
Submitted (OCT-1997) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               565FEC3489F77CA7 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20-AUG-2001 (Rel. 40, Created)
20-AUG-2001 (Rel. 40, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT; 421 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CALRETICULIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               48136 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 60.9°
Best Local Similarity 64.3
Matches 36; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         157 1
413 4
416 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=36596;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CRTC_PRUAR
Q9XF98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
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entities requires a license agreement (See http://www.isb-sib.ch/announce/
or send an email to license@isb-sib.ch).
                                                                             EMBL; AF134733; AAD32207.1; -.
InterPro; IPR001880; Calreticulin.
InterPro; IPR001880; ER_target.
Pfam; PF00262; calreticulin; 1.
PRINTS; PR00626; Calreticulin; 1.
Propon; PB001866; Calreticulin; 1.
PROSITE; PS00004; ER_TARGET; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPAT; 2.
Endoplasmic reticulum; Calcium_binding; Repeat; Signal; Glycoprotein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ricinus Communis (Castor bean).

Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids I; Malpighiales; Euphorbiaceae; Ricinus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A. MEDIANGE 9290642; MEDLINE=9745975; PubMed=9290642; Coughlan S.J., Hastings C., Winfrey R. Jr.; Cloning and characterization of the calreticulin gene from Ricinus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         . .) (POTENTIAL).
FROM ER (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Plant MO1. Biol. 34:897-911(1997).
-!- FUNCTION: THIS PROTEIN BINDS CALCIUM. THERE ARE BOTH HIGH AND LOW APPINITY CALCIUM-BINDING SITES.
-!- SUBCELLULAR LOCATION: ENDOPLASMIC RETICULUM LUMEN.
-!- SIMILARITY: BELONGS TO THE CALRETICULIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5 GDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPD 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N-LINKED (GLCNAC. ..) (POTENTIAL).
N-LINKED (GLCNAC. ..) (POTENTIAL).
PREVENT SECRETION FROM ER (POTENTIAL).
4F5F94CBAA6C6690 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 204; DB 1; Length 421; Pred. No. 1.4e-17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20-AUG-2001 (Rel. 40, Created)
20-AUG-2001 (Rel. 40, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        415 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                           CALRETICULIN.
                                                                                                                                                                                                                                                                                                                                                                                                                               POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pfam; PF00262; calreticulin; 1.
PRINTS; PR00626; CALRETICULIN.
ProDom; PD001866; Calreticulin; 1.
PROSITE; PS00014; ER_TARGET; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; U74631; AAB71420.1; -.
EMBL; U74630; AAB71419.1; -.
Mendel; 10452; Ricco;1166;10452.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   421 AA; 48416 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60.0%;
62.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 62.5
Matches 35; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CALRETICULIN PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                           22
421
56
156
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Job time: 657 sec
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G18888; 080486; 004152;
20-AUG-2001 (Rel. 40, Last sequence update)
20-AUG-2001 (Rel. 40, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
20-AUG-2001 (Rel. 40, Last annotation update)
20-AUG-2001 (Rel. 40, Last sequence update)
ALVALOUIN 2 PRECURSOR.
CRT2 OR CRTL OR TIZMA.8.
ALVALOUPUS INIGIPILATES (MOUSE-CBT CTESS).
EUKBAYOQUE, VIIGIDIUMINES, STEEPTOPHYTE; EMbryophyte; Tracheophyte;
Sprimatophyte; Magnoliophyte; eudicotyledons; core eudicots; Rosidae;
eurosids II, Erassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRAIN-CV. COLUMBIA;
Vysotakaia V.S., Schwartz J.R., Toriumi M., Yu G., Oji O., Kwan A.,
Vysotakaia V.S., Schwartz J.R., Toriumi M., Yu G., Oji O., Kwan A.,
Liu S., Li J., Araujo R., Au M., Brendel V., Buehler E., Conway A.B.,
Conway A.R., Dewar K., Feng J., Kim C., Kurtz D., Li Y., Palm C.J.,
Shinn P., Sun H., Davis R.W., Ecker J.R., Federspiel N.A.,
Theologis A.;
Submitted (NOV-1997) to the EMBL/GenBank/DDBJ databases.
PROSITE; PSO0803; CALRETICULIN_1; 1.
PROSITE; PSO0804; CALRETICULIN_2; 1.
PROSITE; PSO0805; CALRETICULIN_ERPEAT; 2.
Endoplasmic reticulum; Calcim-binding; Repeat; Signal; Glycoprotein.
SIGNAL 1 2 POTENTIAL.
CHAIN 21 415 CALRETICULIN.
CARBOHYD 52 52 N-LINKED (GLCNAC. ..) (POTENTIAL).
CARBOHYD 152 152 N-LINKED (GLCNAC. ..) (POTENTIAL).
SITE 412 415 PREVENT SECRETION FROM ER (POTENTIAL).
SITE 415 AA; 47522 MM; DD5F452E76CC7F8C CRC64;
                                                                                                                                                                                                                                                 0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE OF 1-174 FROM N.A.
MEDLINE-97303616; PubMed-9159940;
Nelson D.E., Glaunsinger B., Bohnert H.J.;
Abundant accumulation of the calcium-binding molecular chaperone calreticulin in specific floral tissues of Arabidopsis thaliana.";
Plunt Physiol. 114:29-37(1997).
                                                                                                                                                                                                                                                                                                   5 GDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPD 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN-CV. LANDSBERG ERROTA; TISSUE-Flower;
Benedetti C.E., Turner J.G.;
"Nucleotide sequence of an Arabidopsis thaliana cDNA encoding a
                                                                                                                                                                                                               Length 415;
                                                                                                                                                                                                            Query Match 59.4%; Score 202; DB 1; Length 41 Hwst Local Similarity 60.7%; Pred. No. 2.4e-17; Matches 34; Conservative 9; Mismatches 13; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KMBL; AC003114; AAC24083.1; ALT_SEQ.
EMHL; U66344; AAC49696.1; ALT_INIT.
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CRT2_ARATH
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PROSITE; PS00014; ER_TARGET; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 2.
Endoplasmic reticulum; Calcium-binding; Repeat; Signal; Glycoprotein; Multigene family.
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N-LINKED (GLCMAC. . .) (POTENTIAL).
PREVENT SECRETION FROM ER (POTENTIAL).
LVAI -> NSAR (IN REF. 3).
G -> E (IN REF. 1).
P -> T (IN REF. 3).
W -> E (IN REF. 3).
W >> E (IN REF. 3).
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                                                                                                                                                                                                                                                                                                                                             POTENTIAL
                                                                                                                                                       Pfam; PF00262; calreticulin; 1. PRINTS; PR00626; CALRETICULIN. ProDom; PD001866; Calreticulin; 1.
                                                      Mendel; 6599; Arath;1166;6599.
Mendel; 31147; Arath;1166;31147.
Mendel; 16506; Arath;1166;16506.
InterPro; IPR001580; Calreticulin.
InterPro; IPR000886; ER_target.
                                     SWISS-2DPAGE; Q38858; ARATH
AAA80652.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       48084
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Matches 35; Conservative
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424
59
424
1155
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408
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Search completed: January 9, 2002, 15:12:15

OM protein

Run on:

Sequence:

Minimum DB Maximum DB

Database

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Strongylocentrotus purpuratus (Purple sea urchin).
Eukaryota; Metazoa; Echinodermata; Eleutherozoa; Echinozoa;
Echinoidea; Euechinoidea; Echinacea; Echinoida; Strongylocentrotidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Susan J.M., Just M.L., Lennarz W.J.;
"Cloning and Characterization of AlphaP Integrin and Calreticulin in Embryos of the Sea Urchin.";
Submitted (AuG-1999) to the EMBL/GenBank/DDBJ databases.
EMBL; ARI77915; AAD55725.1; -.
InterPro; IPR001886; ER_target.
InterPro; IPR001886; Calreticulin.
PRINTS; PR00626; Calreticulin, 1
PRINTS; PR00626; Calreticulin, 1
PROSITE; PS00804; CALRETICULIN.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00804; CALRETICULIN_REPEAT; 3.
PROSITE; PS00804; CALRETICULIN_REPEAT; 3.
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Pred. No. 1.7e-29;
2; Mismatches 3; Indels
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CALRETICULIN.
172C664F59F41F93 CRC64;
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01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-UNV-2001 (TrEMBLrel. 17, Last annotation update)
CALRETICULIN PRECURSOR.
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                            Q9ST29
Q40567
Q9D9Q6
Q9D373
Q9X1V1
Q9NG26
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Q94592
Q976214
Q97VF3
Q97VF3
Q98985
Q98LH3
Q91798
Q91798
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Q9LY26
Q9VAL7
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91.78;
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Best Local Similarity
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    NCBI_TaxID=7668;
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SIGNAL
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0906S0;
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041799 zea mays (m
043712 zea mays (m
040040 hordeum vul
040041 hordeum vul
                                                                                                      Search time 78.15 Seconds (without alignments) 114.173 Million cell updates/sec
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O91711 xenopus lae
O9u916 drosophila
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098984 rana rugosa
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Q26268 aplysia cal
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340
1 TDMHGDSEYNIMFGPDICGP.....IRCKDDEFTHLYTLIVRPDN
                4.5
Compugen Ltd
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                                                                                                                                                                                                                                                                              473505 seqs, 146272329 residues
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                GenCore version
Copyright (c) 1993 - 2000
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Maximum Match 100%
Listing first 45 summaries
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Gapop 10.0 , Gapext 0.5
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sp_invertebrate:*
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sp_bacteria:*
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Perfect score:
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Gaps

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120 DMHGBSPYNIMFGPDICGPGTKKVHVIFNYKGKNLLIKKDIRCKDDEFTHLYTLIVKSDN 179

2 DMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 61

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Result Š.

Ogvxf6 drosophila Q9hfc6 yarrowia li Q9ly26 arabidopsis Q9val7 drosophila

homo sapien 002393 drosophila Q16094 homo sapier 29vyp4 drosophila

Q41798 zea mays (m Q9d2k5 mus musculu

09y1v1 leishmania 09xg2 tritrichomo 09xg8 trypanosoma 09459 trypanosoma 094592 leishmania 076214 schistosoma 09tv3 schistosoma 09tv3 schistosoma 09sxw3 lithospermu 0470 schistosoma 099885 rana rugosa 099113 halocynthia

Q40567 nicotiana t Q9d9q6 mus musculu Q9d373 mus musculu

solanum mel brassica na

Gaps

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Indels

Length 318;

026268 926268

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RESULT Q26268

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20 EMHGDSQYFIMFGPDICGPGTKKVHVIFNYKGKNHLINKDIRCKDDEYTHLYTLIVRPD 78
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Amphibia; Batrachia; Anura; Mesobatrachia; Pipoldea; Pipidae;
Xenopodinae; Xenopus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Treves S., Zorzato F., Pozzan T.; "Identification of calreticulin isoforms in the central nervous
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CALRETICULIN.
CRC OR CG4249.
Drosophila melanogaster (Fruit fly).
Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
                                                                                                           36997 MW; C88102EA1CAC1506 CRC64;
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Xenopus laevis (African clawed frog).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
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Pred. No. 5.2e-28;
3; Mismatches 5;
                                                                                                                                                                                                                   Score 303; DB 13;
Pred. No. 6.8e-29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    343 AA
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EMBL: X67598; CAA47867.1;
InterPro; IPR001580; Calreticulin.
Profo262; Calreticulin; 1.
PRINTS; PR00626; CALRETICULIN.
PRODOM; P0001866; CALRETICULIN.
PROSITE; PS00803; CALRETICULIN.; 1.
PROSITE; PS00804; CALRETICULIN.; 1.
PROSITE; PS00805; CALRETICULIN.; 1.
                                                                                                                                                                                                               Query Match 89.1%; Score 303; DB Best Local Similarity 91.5%; Pred. No. 6.8e Matches 54; Conservative 3; Mismatches
PS00805; CALRETICULIN_REPEAT; 3. PS00014; ER_TARGET; UNKNOWN_1.
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MEDLINE-93074997; Pubmed-1445218;
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Best Local Similarity 86.9%;
Matches 53; Conservative
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                                                                                                           318 AA;
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Q9U916;
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MEDITAR-9309897; PubMed:1463604;

MEDITAR-9309897; PubMed:1463604;

MEDITAR-9309897; PubMed:1463604;

MEDITAR-9309897; PubMed:1463604;

MEDITAR-9309897; PubMed:1463604;

Tong-term sensitization training in Aplysia leads to an increase in calreticulin, a major presynaptic calcium-binding protein.";

Meditar and programmed and protein.";

Meditar programmed and pro
                                                                                                                                                                                                                                                                                                                           Aplysiu californica (Californiu sea hare).
Kukuryotu; Metazoa; Mollusca; Gastropoda; Opisthobranchia; Anaspidea;
Aplysiidae; Aplysiu.
NCBI_TuxID-6500;
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MEDLINE-20063780; PubMed-10594174;
MKDLINE-20063780; PubMed-10594174;
MKDTAKU S., Hoshiyama D., Katoh K., Suga H., Miyata T.;
"Monophyly of lampreys and hagfishes supported by nuclear DNA-coded genes.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rukaryota; Metazoa; Chordata; Craniata; Vertebrata; Hyperoartia;
Petromyzontiformes; Petromyzontidae; Lampetra.
NCBL_TaxID:7753;
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46738 MW; 14CAA201840D1D69 CRC64;
                                                                                                                                                                                                    01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-UNV-2001 (TrEMBLrel. 17, Last annotation update)
CALRETICULIN.
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01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   89.7%; Score 305; DB 5;
86.9%; Pred. No. 5e-29;
.1ve 5; Mismatches
                                                                                                                                         405 AA
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InterPro; PR000886; ER_target.
InterPro; IPR001580; Calreticulin.
Pfum; PP00262; Calreticulin; 1.
PRINTS; PR00626; Calreticulin; 1.
ProDom; P000166; Calreticulin; 1.
PROSITE; PS00804; CALRETICULIN.
                                                                                                                                         PRT;
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Best Local Similarity 86.99
Matches 53; Conservative
                                                                                                                                     PRELIMINARY;
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SEQUENCE
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Best Local S
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Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroidea; Drosophilidae; Drosophila.
NCBI_TaxID=7227;
                                                                                                                                                                                                                                                                                                                                                       120 TDMHGESPYEIMFGPDICGPGTKKVHVIFSYKGKNHLISKDIRCKDDVYTHFYTLIVRPD 179
                                                                                                                                                                                                                                                                                                                    Gaps
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ireves S., Zorzato F., Pozzan T.;
"Identification of calreticulin isoforms in the central nervous
                                                                                                                                                                                                                                                                                                                   ö
                                                                                             Submitted (JAN 1997) to the EMBL/GenBank/DDBJ databases.

RIBBL; AB000718; BAA85379.1; -
RIBBL; AB000718; BAA85379.1; -
RIBBL; AB000718; BAA85379.1; -
RIBBL; AB000718; BAA85379.1; -
RIBCPPC; IPR000586; Calreticulin.
REAM; PR00262; Calreticulin; 1.
RPOOM; PR001866; Calreticulin; 1.
RPOSITE; PS00803; CALRETICULIN.2; 1.
RPOSITE; PS00804; CALRETICULIN.2; 1.
RPOSITE; PS00804; CALRETICULIN.2; 1.
RPOSITE; PS00804; CALRETICULIN.3; 2.
RPOSITE; PS00804; CALRETICULIN.3; 3.
RPOSITE; PS00804; CALRETICULIN.3; 3.
RPOSITE; PS00804; CALRETICULIN.3; 3.
RROSITE; PS00804; CALRETICULIN.3; 3.
RROSITE; PS00804; CALRETICULIN.3; 3.
RROSITE; PS00804; CALRETICULIN.3; 3.
RROSITE; PS00804; CALRETICULIN.3; 3.
                                                                                                                                                                                                                                                                                          Length 406;
                                                                                                                                                                                                                                                                                       86.2%; Score 293; DB 5; Length 40
85.2%; Pred. No. 1.4e-27;
ive 4; Mismatches 5; Indels
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CALRETICULIN.
891DA66E00EBBEFA CRC64;
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Q91710;
Q17.10;
Q1.JAN-1998 (TrEMBLrel. 05, Created)
Q1.JAN-1998 (TrEMBLrel. 05, Last sequence update)
Q1.JUN-2001 (TrEMBLrel. 17, Last annotation update)
CALRETICULIN PRECURSOR (FRAGMENT)
                                                                        Dodo K., Sakoyama Y., Gamo S.; "Drosophila melanogaster calreticulin for mRNA.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PS00804; CALRETICULIN_2; 1.
PS00805; CALRETICULIN_REPEAT; 2.
PS00014; ER_TARGET; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Biochem. J. 287:579-581(1992).
EMBL, X67597, CAA47866.1; -
Interpro; IPR000886; ER_target.
Interpro; IPR001580; Calreticulin.
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                                                                                                                                                                                                                                                                                      Query Match 86.2
Best Local Similarity 85.2
Matches 52; Conservative
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NCBI_TaxID=8355;
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TISSUE-BRAIN;
                                               SEQUENCE FROM N.A.
                                                             STRAIN-OREGON-R;
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SIGNAL
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                                                                           1 TDMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPD
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                                                                                                                                                                                                                                                                                                                                                                                             Rana rugosa (Frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Neobatrachia; Ranoidea; Ranidae; Rana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Strong expression of the calreticulin gene in the liver of Rana rugosa Tadpoles."; J. Exp. 2ool. 0:0-0(1996).
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     Length 411;
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                                        Indels
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01-NOV-1996 (TrEMBLrel. 01, Created)
01-JAN-1999 (TrEMBLrel. 09, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
CALRETICULIN.
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01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
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Pred. No. 8e-27;
1; Mismatches 5;
 Score 288; DB 13;
Pred. No. 5.9e-27;
3; Mismatches 6;
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PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 3.
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419 AA; 48658 MW; 2C8570
                                                                                                                                                                                                                                                                                                                         Created)
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InterPro; IPR001580; Calreticulin.
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PRINTS; PR00626; CALRETICULIN.
84.78;
                                                                                                                                                                                                                                                                                  PRELIMINARY;
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EMBL; D78589; BAA11425.1;
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                                          Conservative
     Query Match
Best Local Similarity
Matches 52; Conserv
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                                                                                                                                                                                                                                                                                                                                                                             CALRETICULIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Yamamoto S.;
                                                                                                                                                                                                                                                                                                                     01-FEB-1997
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1 TDMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPD 60
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Brachydanio rerio (Zebrafish) (Zebra danio).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Extinopterygii; Neopterygii; Teleostei; Euteleostei; Ostariophysi;
Cypriniformes; Cyprinidae; Rasborinae; Danio.
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NCBL_TaxID-42156;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rubinstein A.L., Lee D., Luo R., Henion P.D., Halpern M.E.; "Genes Dependent on Zebrafish cyclops Function Identified by Differential Gene Expression Screen.";
                                                                                                                     Length 387;
                                                                                            Score 274; DB 5; Lengua J. Pred. No. 2.8e-25;
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MacLennan K., Hoffman W.H., Taylor D.W.;
Submitted (SEP-1997) to the EMBL/GenBank/DDBJ databases.
EMBL; AJ001621; CAA04877.1; -.
InterPro; IFR01580; Calreticulin.
Pfam; PF00262; calreticulin; 1.
CALRETICULIN.
E7741BF6AAFA5885 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000C5B4004699B6 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           79.4%; Score 270; DB 13;
80.0%; Pred. No. 9.2e-25;
iive 6; Mismatches 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              ¥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ₹
                                                                                                                                                                                5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pfam; PF00262; calreticuln; 1.
PRINTS; PR00626; CALRETICULIN.
ProDom; PD001866; CALRETICULIN. 1.
PROSITE; PS00804; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 3.
PROSITE; PS00014; ER_TARGET; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Created)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; AF195882; AAF13700.1; -.
InterPro; IPR000886; ER_target.
InterPro; IPR001580; Calreticulin.
                              44941 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              48723 MW;
                                                                                                                  80.6%;
80.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Litomosoides sigmodontis.
                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Genesis 0:0-0(1999)
                              387 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
nes 48; Conserv
                                                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          417 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CALRETICULIN.
                                                                                                                                                                                   48;
                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       018478 018478;
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Matches
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   CHAIN
                                                                                                                                                                                                                                                                                                                                                                                             RESULT 10
                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT
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SEQUENCE FROM N.A.

WEDLINE 9909497; Pubmod-9879888;

Tauji N., Morales T.H., Ozols V.V., Carmody A.B., Chandrashekar R.;

Tauji N., Morales T.H., Ozols V.V., Carmody A.B., Chandrashekar R.;

Tauji N., Morales T.H., Ozols V.V., Carmody A.B., Chandrashekar R.;

Tauji N., Morales T.H., Ozols V.V., Carmody A.B., Chandrashekar R.;

Mol. Blochem. Parasitol 197:69-79(1998).

RMBL, APO52978; AAD034051.

RMBL, APO5262; Calreticulin.

Probom: PF00262; Calreticulin.

PRINTS; PR00626; Calreticulin.

PROSTIE; PS00803; CALRETICULIN.1;

PROSTIE; PS00804; CALRETICULIN.2;

PROSTIE; PS00804; CALRETICULIN.2;

PROSTIE; PS00805; CALRETICULIN.2;

PROSTIE; PS00805; CALRETICULIN.2;
                                                                                                                                                                                                                                                                                                'A secreted calreticulin protein in Ixodid tick (Amblyomma americanum)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121 LHGESPYKIMFPPDICGPGTKKVHVIFNYKGKNHLINKEIRCKDDVFTHLYTLIVKPDN 179
                                                                                                                                                                                                         TISSUE SALIVARY GLANDS;
Juworski D.C., Simmen F.A., Lamoreaux W.J., Coons L.B., Muller M.T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3 MHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 61
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Onchocercidae; Dirofilaria,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ;
0
                                                    Eukaryota; Metazoa; Arthropoda; Chellcerata; Arachnida; Acari;
Purusitiformes; Ixodida; Ixodidae; Amblyomma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 410;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 82.6%; Score 281; DB 5; Length 41 Brst Local Similarity 84.7%; Pred. No. 4.2e-26; Matches 50; Conservative 4; Mismatches 5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
TISSUE SALIVARY GLANDS;
FULL Thornton J.M., Jaworski D.C., Needham G.R.;
Submitted (NOV-1998) to the EMBL/GenBank/DDBJ databases.
EMBL, 007708; ARC79094.1; -.
InterPro; IPRO0886; ER_target.
InterPro; IPRO01580; Culreticulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Submitted (MAR-1994) to the EMBL/GenBank/DDBJ databases
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01-MAY-1999 (TrEMBLrel. 10, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
CALRETICULIN PRECURSOR.
Dirofilaria inmitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PEGUNIC PRODUCTS CALRESTCULIN.
PRINTS; PRODG26; CALRESTCULIN.
PRODCH; PSO0003; CALRESTCULIN.; 1.
PROSITE; PSO0003; CALRESTCULIN.; 1.
PROSITE; PSO0005; CALRESTCULIN.]; 1.
PROSITE; PSO0004; ER_TARGET; UNKNOWN.];
SEQUENCE 410 AA; 47485 MW; 32CCB8750AI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       387
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                                                                                                                                                                       SEQUENCE OF 49-410 FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
TISSUE SALIVARY GLANDS;
JUWOFHKI D.C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18
                        Amblyomma americanum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TuxID -6287;
                                                                                                                     NCBI_TaxID-6943;
                                                                                                                                                                                                                                                                       Needham G.R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Signal.
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RESULT CONTRACTOR OF THE CONTR

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Indels

Length 417;

us-09-828-000-4.rspt

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Schistosoma japonicum (Blood fluke).
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SEQUENCE
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                                                                                                                                                                                                                                                      2 DMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Strongylida;
Ancylostomatoidea; Ancylostomatidae; Bunostominae; Necator.
NCBI_TaxID=51031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1;
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                                                                                                                                                                          Length 375;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pritchard D.I., Brown A., McElroy P., Loukas A., Girdwood I Berry C., Fullkrug R., Beck E.;
"Calreticulin is a hookworm allergen.";
Submitted (JUW-1998) to the EMBL/GenBank/DDBJ databases.
EMBL; AJ006790; CAA07254.1;
InterPro; IPR000886; ER.target.
InterPro; IPR001890; Calreticulin.
                                                                                                                                                                        79.1%; Score 269; DB 5; Length 37 78.3%; Pred. No. 1.1e-24; .ive 6; Mismatches 7; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             76.9%; Score 261.5; DB 5; Length 77.0%; Pred. No. 9.5e-24; Live 6; Mismatches 7; Indels
                                                                                                             375 AA; 43842 MW; 03F7642FBFF7A5B8 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            POTENTIAL.
21F38B0515487B6F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Last sequence update)
Last annotation update)
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Last annotation update)
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                                                                                                                                                                                                                                                                                                                                                                                                    403 AA
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PRINTS; PR00626; CALRETICULIN.
ProDom; P500803; CALRETICULIN_1; 1.
PROSITE; P500803; CALRETICULIN_1; 1.
PROSITE; P500804; CALRETICULIN_2; 1.
PROSITE; P500805; CALRETICULIN_2; 1.
PROSITE; P500014; ER_TARGET; UNKNOWN_1.
                  ProDom; PD001866; Calreticulin; 1.
PROSITE; PS00803; CALRETICULIN_1; 1.
PROSITE; PS00804; CALRETICULIN_2; 1.
PROSITE; PS00805; CALRETICULIN_REPEAT; 3.
NON_TER 375 A7, 43842 MW; 03F7642FBFI
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                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               403 AA; 46833 MW;
PR00626; CALRETICULIN
                                                                                                                                                                                                                                                                                                                                                                                                                                     01-NOV-1998 (TrEMBLrel. 08, 01-NOV-1998 (TrEMBLrel. 08, 01-JUN-2001 (TrEMBLrel. 17, CALRETICULIN PRECURSOR. CRT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-NOV-1996 (TrEMBLrel. 01, 01-NOV-1996 (TrEMBLrel. 01, 01-JUN-2001 (TrEMBLrel. 17, CALRETICULIN (FRAGMENT).
                                                                                                                                                                        Query Match 79.1
Best Local Similarity 78.3
Matches 47; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity 77.0 Matches 47; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                     076961;
01-NOV-1998 (TrEMBLrel.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Necator americanus.
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PRINTS;
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                                                                                                                                                                                                                                                                                                                                                                                                  076961
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                                                                                                                                                                                                                                                                                                                                                       RESULT 12
7076961
AC 076961
AC 076961
DT 01-NOV
DT 01-NO
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Q26514
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  SO R D R T F S
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Schistosomatidae;
Eukaryota; Metazoa; Platyhelminthes; Rhabditophora; Neodermata;
Trematoda; Digenea; Strigeidida; Schistosomatoidea; Schistosomatidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
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REBL; AF044408; AAC00515.1; -

InterPro; IPR000886; ER_Larget.

Refam; PF00262; calreticulin; 1.

RPINYS; PR00560; Calreticulin; 1.

RPCODOM; PD001886; Calreticulin; 1.

RPCOSTTE; PS00803; CALRETICULIN.

RPCOSTTE; PS00804; CALRETICULIN_1; 1.

RPCOSTTE; PS00804; CALRETICULIN_1; 1.

RPCOSTTE; PS00805; CALRETICULIN_1; 1.

RPCOSTTE; PS00805; CALRETICULIN_N. 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 5; Length 350;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8; Indels
                                                                                                                                                             STRAIN=CHINESE;
Huggins M.C., Moloney N.A.;
Submitted (AUG-1993) to the EMBL/GenBank/DDBJ databases.
EMBL; MO524; AAA29917.1; -.
InterPro; IPR000886; ER_target.
InterPro; IPR001580; Calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   40385 MW; 30FAB4E8BB685D1C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Schistosoma japonicum (Blood fluke).
Eukaryota, Metazoa; Platyhelminthes; Rhabditophora;
Trematoda; Digenea; Strigeidida; Schistosomatoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-JUN-1998 (TrEMBLrel. 06, Created)
01-JUN-1998 (TrEMBLrel. 06, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       73.5%; Score 250; DB 5; 75.9%; Pred. No. 2e-22; iive 6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            396 AA
                                                                                                                                                                                                                                                                                                                                                                                 PRODOM; PD001866; Calreticulin; 1.
PROSITE; PS00803; CALRETICULIN 1; 1.
PROSITE; PS00804; CALRETICULIN 2; 1.
PROSITE; PS00805; CALRETICULIN REPEAT; 1.
PROSITE; PS00014; ER_TARGET; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                                 Pfam; PF00262; calreticulin; 1. PRINTS; PR00626; CALRETICULIN.
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Best Local Similarity 75.9:
Matches 44; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      350 AA;
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Matches 44; Conserv
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                                                        Schistosoma.
NCBI_TaxID=6182;
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RESULT 15
09USGO PRELIMINARY; PRT; 321 AA.

AC 09USGO (TrEMBLrel. 13, Created)
DT 01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT 01-MAY-2000 (TrEMBLrel. 17, Last annotation update)
DT 01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
DT 01-MAY-2000 (TrEMBLrel. 17, Last annotation update)
DT 01-MAY-2000 (TrEMBLrel. 17, Last annotation update)
DT 01-MAY-2000 (TrEMBLrel. 17, Last annotation update)
DR RUKALYOTEN BUGGAGE (TORDALE, CTEMBLR)
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NYAINIGAGE TO TRELIME SUPPORTED TO THE COLOURY NATOR N.A.
DR PROSTITE; PRO00865 CALRETICULIN, 1.
DR PROSTITE; PRO00865 CALRETICULIN, 1.
DR PROSTITE; PRO00865 CALRETICULIN, 2.
DR PROSTITE; PRO00865 CALRETICULIN, 3.
DR PROSTITE; PRO008
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MBP-calreticulin, maltose binding protein; vasostatin; N-terminal; angiogenesis; inhibition; endothelial cell; anti-angiogenic; eneropprotective; antidiabettic; cytostatic; dermalogical; hepatic; immunosuppressive; antidiflammatory; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human vasostatin (calreticulin N-terminal 180 amino acids).
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Synthetic.
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RESULT
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Calreticulin. Hom
Human MBP-calretic
Calreticulin. Hom
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54.309 Million cell updates/sec
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                                                                    Search time 83.2 Seconds
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- 2000 Compugen Ltd.
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Listing first 45 summaries
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Copyright (c) 1993
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Searched:

Arabidopsis Arabidopsis

Inhibiting endothelial cell growth and angiogenesis using calreticulin,

Ë Yao

Pike SE,

Tosato G,

WPI; 2000-303767/26

Flea calreticulin Partial sequence o Recombinant human Recombinant human Recombinant delta-

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Sontheimer RD,
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                                                     contacting the cells with calcationing or its fragments variants).

Fragments of calrecticulin causes at least 40% inhibition of angiogenesis, tumor growth und/or endothelial cell growth (claimed). The method may be used for inhibiting angiogenesis in a patient. The angiogenesis is mesouscilated with a disease other than a tumor that is associated with neovascularization (e.g. diabetic neuropathy, retrolental fibroplasia, trachoma, neovascular glaucoma, psoriasis, angiofibromas, immune inflammation, atherosclerosis, excessive wound repair, retinal neovascularization, macular degeneration, corneal graft rejection, contact lens overwear, Crohn's disease, non-immune inflammation, theumatoid arthritis, systemic lupus erythromatosus, thyroiditis, doodpasture's syndrome, systemic vasculitis, scleroderma sjorgen's syndrome, surcoidosis and primary biliary cirrhosis). The method may also be used for treating/inhibiting tumor growth especially
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MBP-calreticulin; maltose binding protein; angiogenesis; inhibition; endothelial call; anti-angiogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Inhibiting endothelial call growth and angiogenesis using calreticulin, useful for suppressing tumor growth
                                                                                                                                                                                                                                                                                                                                   Gaps
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                                             of inhibiting endothelial cell growth comprises
                                                                                                                                                                                                                                                                             Length 180;
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                                                                                                                                                                                                                                                                           Score 340; DB 21;
Pred. No. 4.3e-39;
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useful for suppressing tumor growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Recombinunt human MBP-calreticulin.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 4; Puge 80-81; 99pp; English
                       Claim 4; Page 82; 99pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99WO-US23240
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                     Kaposi's sarcoma (claimed)
                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 100.
Matches 61; Conservative
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                                                                                                                                                                                                                                          180 AA;
                                              novel method
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AAY92350
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Recombinant human MBP-calreticulin comprises the sequence of human caltericulin (see AV92349) without the 17 N-terminal amino acids.

A novel method of inhibiting endothelial cell growth comprises contacting the cells with calreticulin (or its fragments/variants).

Fragments of calreticulin causes at least 40% inhibition of angiogenesis, tunor growth and/or endothelial cell growth (calaimed). The method may be used for inhibiting angiogenesis in a patient. The angiogenesis is associated with a disease other than a tumor that is associated with neovascularization (e.g. diabetic neuropathy, retrolental introperson inflammation, atherosclerosis, excessive wound repair, retinal neovascularization, acherosclerosis, excessive wound repair, retinal neovascularization, adisease, non-immune inflammation, in acular degeneration, corneal graft rejection, contact lens overwear, Cronn's disease, non-immune inflammation, thematoid arthritis, systemic lupus erythromatosus, thyroiditis, condopsature's syndrome, systemic lupus erythromatosus, thyroiditis, goodpasture's succidents and primary biliary cirrhosis). The method may also be used for treating/inhibiting tumor growth especially
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Synthetic peptides corresp. to an epitopic core of Ro antigen are expressed recombinantly to detect autoantibodies, for identification of autoimmune diseases. These epitopes are AAs 24-36, 23-36, 188-209,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAP92276 standard; protein; 417 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.08; Fix
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   89WO-US01213
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23-FEB-1990 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60 kD Ro (Ro/SSA) antigen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Capra
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1989-309537/42.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity
Matches 61; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 400 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N-PSDB; AAP92276.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Clq and collectin receptor; cClqR binding domain; complement ubiquitin; CUB functionality; inhibitor; complement activation; inflammation; myocardial infarction; brain ischaemia; gut ischaemia; amyloid plaque; rheumatoid arthritis; systemic lupus erythematosus; Alzheimer's disease; immune complex nephritis; therapy.
The peptides may be substd. for ribonucleoprotein particle
                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                      1 TOMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPD 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Use of a cClqR binding domain - to modulate complement ubiquitin (CUB) functionality.
                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                 Length 417;
                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                          Score 340; DB 10;
Pred. No. 1.2e-38;
                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure; Page 26-27; 31pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAY00927 standard; Protein; 417 AA.
                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                       100.0%;
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     low molecular weight molecule.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          98WO-GB02430.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      97GB-0016998.
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                                                                                                                                                                                                                                                          61; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (UYLE-) UNIV LEICESTER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 1999-180404/15.
                                                                                                                                                                                                                            Similarity
                                                                                             417 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Calreticulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        W09907406-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12-AUG-1997;
   or 241-255.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               28-MAY-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Schwaeble W;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18-FEB-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                n 180
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                                                                                                Sequence
                                                                                                                                                                                          Query Match
Best Local S
                                        antigens
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                                                                                                                                                                                                                                                          Matches
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417 AA;

Sequence

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A novel method of inhibiting endothelial cell growth comprises

contacting the cells with calreticulin (or its fragments/variants).

Fragments of calreticulin causes at least 40% inhibitino of angiogenesis,

tumor growth and/or endothelial cell growth (claimed). The method may be

used for inhibiting angiogenesis in a patient. The angiogenesis is

associated with a disease other than a tumor that is associated with

neovascularization (e.g. diabetic neuropathy, retrolental fibroplasia,

trachoma, neovascular glaucoma, psoriasis, angiofibromas, immunue

neovascularization, atherosclerosis, excessive wound repair, retinal

neovascularization, acular degeneration, corneal graft rejection,

contact lens overwear, Crohn's disease, non-immune inflammation,

rheumatoid arthritis, systemic lupus erythromatcosus, thyroiditis,

coodpasture's syndrome, systemic vasculitis, scleroderma, sjorgen's

syndrome, sarcoidosis and primary cirrhosis). The method may
                                 ö
                                                                                                                                                                                                                                                                                                                                                      MBP-calreticulin; maltose binding protein; angiogenesis; inhibition; endochelial cell; anti-angiogenic; neuroprotective; antidiabetic; cytostatic; dermalogical; immunosuppressive; antiinflammatory; hepatic; anti-atherosclerotic; gastrointestinal; anti-arthritic; ophthalmic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            endothelial cell growth and angiogenesis using calreticulin,
                                                                            Gaps
                                                          1 TOMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPD 60
                              ;
 Length 417;
                               Indels
Score 340; DB 20;
Pred. No. 1.2e-38;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (USSH ) US DEPT HEALTH & HUMAN SERVICES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /label= signal_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /label= mature_protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Disclosure; Page 79-80; 99pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
1..17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tumor growth
                                                                                                                                                                                                                              AAY92349 standard; Protein; 417 AA.
100.0%; Solution 100.0%; Putive 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99WO-US23240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98US-0103438.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N-PSDB; AAA09346, AAA09347.
                                                                                                                                                                                                                                                                                         10-AUG-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Kaposi's sarcoma (claimed)
                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            suppressing
                                                                                                                                                                                                                                                                                                                         Human MBP-calreticulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pike SE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2000-303767/26
 Query Match
Best Local Similarity
Matches 61; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200020577-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      05-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     06-OCT-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13-APR-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Inhibiting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tosato G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          useful for
                                                                                                                                                    n 180
                                                                                                                     N 61
                                                                                                                                                                                                                                                             AAY92349;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Peptide
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                                                                                                                     61
                                                                                                                                                    180
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AAY92349
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417

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Flea calreticulin protein PCtCall589 (AAW04171) is a calcium-binding protein found in the salivary glands of Ctenocephalides felis.

Its amino acid sequence was deduced from a cDNA clone (AAT9516) obtd. from a calivary gland cDNA library. Recombinant PCtCall589 can be produced in host cells transformed with a vector carrying calreticulin nucleic acids. Calreticulin alters the blood feeding behaviour of haematophagous insects and can be administered to an animal to reduce infestation. It reduces calreticulin activity in insects, so reducing the insect burden on an animal. Calreticulin can be used to elicit an immune response, thereby desensitising an animal to allergic dermatitis caused by fleas, mosquitoes or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 DMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Haematophagous insect calreticulin protein – used to reduce insect infestation and desensitise patients to allergic dermatitis
                                                                                                                                                           Calreticulin; flea; haematophagous insect; allergic dermatitis; vaccine; therapy; PCtCal403.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 403;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  River blindness; onchocerciasis; vaccine; antigen; parasite.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Partial sequence of Onchocera volvulus 42 kD antigen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 290; DB 17;
Pred. No. 9.8e-32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 5; Page 68-69; 86pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ¥
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83.3%;
                                                                                                                                                                                                                                                                                                                                                                                                    96WO-US03133
                                                                                                          Flea calreticulin PCtCal403
                                                                                                                                                                                                                                                                                                                                                                                                                                                     95US-0401509
                                                   12-DEC-1996 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rushlow KE, Stiegler
                                                                                                                                                                                                                                           Ctenocephalides felis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 1996-442861/44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        volvulus
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    403 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N-PSDB; AAT39516;
N-PSDB; AAT39517.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (HESK-) HESKA
                                                                                                                                                                                                                                                                                            WO9628469-A1
                                                                                                                                                                                                                                                                                                                                                                                                 08-MAR-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  09-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                19-SEP-1996
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cultcoides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Onchocerca
     AAW04171;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAR12312;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
AAR1231
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The present sequence is calreticulin. It and a C-domain derived peptide (AAW06736) are useful for treating a patient to inhibit restenosis. The calreticulin-type cpds. are administered either parenterally, intravenously or via a catheter and can target areas of vascular damage
                                                                                                                                                                                                          Gaps
                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
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                                                                                                                                                                            1 TDMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Inhibition of restenosis in patients – using calreticulin or a C-domain polypeptide of calreticulin or a variant with the same
                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ó
                                                                            Length 417;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 401;
                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 18;
5.7e-38;
hes 0;
                                                                       Score 340; DB 21;
Pred. No. 1.2e-38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  calreticulin; C-domain; restenosis; inhibitor,
                                                                    ch 100.0%; Score 340; I Similarity 100.0%; Pred. No. 1.5 61; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAW11156 standard; peptide; 401 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAW04171 stundard; Protein; 403 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98.58; SCOL.
100.08; Pre
0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             to inhibit or prevent restenosis.
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95US-0442844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
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                                                                    Query Match
Best Local Similarity
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Best Local Similarity
Matches 60; Conserv
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Calreticulin.

31-MAY-1997

AAW11156;

n 180 61 N 61

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AAW11156

Homo saptens WO9636643-A1

17-MAY-1996; 16-MAY-1996; 17-MAY-1995;

Lucas A,

activity

21-NOV-1996

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Gaps

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401

Seguence

Location/Qualifiers 160..166

Key Region

RESULT
AAW04171
ID AAW0
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06-OCT-1998;
                                                                   05-0CT-1999;
                                                13-APR-2000
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          Synthetic.
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                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
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ID AAY9
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                                                                                                                                                                                                                                                                                                         from RNA isolated from nodules excised from patients infected with O. volvulus. The N-terminal is incomplete, however Abs which specifically bind to protein prepd. from induced cultures of lambda RAL-1 lysogens recognise a single polypeptide of mol. wt. 42.000 in extracts of adult worms. Analysis deduced sequence suggests that it encodes a protein of mol. wt. 39,130. If the cuignests that it encodes a protein of mol. wt. 39,130. If the suggests that nost of hecoding sequence is present. The three repeats are highly hydrophilic regions likely to be exposed on the antigen expressed by the clone can be used stimulate T-cells of individuals infected by the parasite to proliferate and may be used as the basis for a vaccine against Onchocerciasis or river
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 DMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 61
                                                                                                                                                                                                                                       DNA encoding Onchocerca volvulos antigen – used to express recombinant antigen for vaccine against onchocerciasis or river
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                   The sequence was deduced from a cDNA clone lambda RAL-1 prepd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            76.8%; Score 261; DB 12; Length 336; llarity 76.7%; Pred. No. 8.1e-28; Conservative 6; Mismatches 8; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Recombinant human calreticulin residues 120-180.
               /label= repeat unit
/note= "hydrophilic"
                                                                                                                                                                                                                                                                               Disclosure; Fig 7; 20pp; English.
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                                                                                                                            88US-0214264.
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                                                                                                                                                                   (UYHO-) UNIV HOSPITALS CLEV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                       Greene BM, Unnasch TR;
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Best Local Similarity
'-hag 46; Conservē
                                                                                                                                                                                                          WPI; 1991-185179/25.
N-PSDB; AAQ11987.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                336 AA;
                                                                                                                            30-JUN-1988;
                                                                                    US5021342-A.
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                                                                                                        04-JUN-1991
                                                                                                                                                                                                                                                            blindness
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                   Region
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A novel method of inhibiting endothelial cell growth comprises

contacting the cells with calreticulin (or its fragments/variants).

Fragments of calreticulin causes at least 40% inhibition of angiogenesis,
tumor growth and/or endothelial cell growth (claimed). The method may be
used for inhibiting angiogenesis in a patient. The angiogenesis is
associated with a disease other than a tumor that is associated with
neovascularization (e.g. diabetic neuropathy, retrolental fibroplasia,
trachoma, neovascular glaucoma, psoriasis, angiofibromas, immune
contact lens overwear, crohn's disease, non-immune inflammation,
contact lens overwear, crohn's disease, non-immune inflammation,
contact lens overwear, crohn's disease, non-immune inflammation,
cheumatoid arthritis, systemic lupus erythromatosus, thyroiditis,
cheumatoid arthritis, systemic vasculitis, scleroderma, Sjorgen's
syndrome, sarcoidosis and primary blilary cirrhosis). The method may
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Inhibiting endothelial cell growth and angiogenesis using calreticulin, useful for suppressing tumor growth
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18 CGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   71.8%; Score 244; DB 21; 100.0%; Pred. No. 2.1e-26;
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                                                                                                                                                                                                                                                                     (USSH ) US DEPT HEALTH & HUMAN SERVICES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 4; Page 82-83; 99pp; English.
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                                                                                                                                99WO-US23240
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                                                                                                                                                                                                                                                                                                                                       Yao L;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10-AUG-2000 (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2000-303767/26
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Matches 44; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 AA;
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WO200020577-A1
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This sequence comprises recombinant human calreticulin (AAY92350)
missing the N-terminal 120 amino acids.
A novel method of inhibiting endothelial cell growth comprises
contacting the cells with calreticulin (or its fragments/variants).
Fragments of calreticulin causes at least 40% inhibition of
anjiogenesis, tumor growth and/or endothelial cell growth (claimed). The
method may be used for inhibiting angliogenesis in a patient. The
anglogenesis is associated with a disease other than a tumor that is
method may be used for inhibiting angliogenesis, and patient. The
anglogenesis is associated with a disease other than a tumor that is
cansociated with neovascularization (e.g. diabetic neuropathy, retrolental
fibroplasia, trachoma, neovascular glaucoma, psoriasis, angiofibromas,
immune inflammation, atherosclerosis, excessive wound repair, retinal
neovascularization, ancular degeneration, corneal graft rejection,
contact lens overwear, Crohn's disease, non-immune inflammation,
cheumatoid arthritis, systemic lupus erythromatosus, thyroiditis,
coodpasture's syndrome, systemic vasculitis, scleroderma, Sjorgen's
syndrome, sarcoldosis and primary biliary cirrhosis). The method may
also be used for treating/inhibiting tumor growth especially
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New nucleic acid molecules encoding a calcium binding chaperone protein in endoplasmic reticulum, calreticulin, and calreticulin promoter sequences, useful for producing foreign gene products in plant cells .
                                                                            cell growth and angiogenesis using calreticulin, tumor growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Castor bean; calreticulin; calcium binding; er; endoplasmic reticulum;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 280;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           69.1%; Score 235; DB 21;
100.0%; Pred. No. 2.5e-24;
1ve 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Castor bean calreticulin SEQ ID NO: 2.
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                                                                                                                                               Claim 4; Page 86; 99pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (PION-) PIONEER HI-BRED INT INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAB66341 standard; Protein; 415
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Best Local Similarity 100.4
Matches 43; Conservative
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                                                                          Inhibiting endothelial useful for suppressing
                           WPI; 2000-303767/26
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US6171864-B1.
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                                                                                                                                                                                                                                                                                                                                             contacting the cells with calreticulin (or its fragments/variants).

Contacting the cells with calreticulin (or its fragments/variants).

Cragments of calreticulin causes at least 40% inhibition of anglogenesis, timor growth and/or endothelial cell growth (claimed). The method may be used for inhibiting anglogenesis in a patient. The anglogenesis is used for inhibiting anglogenesis of the associated with neovascular glaucoma, partial anglofibromas, immune inflammation, atherosciarosis, excessive wound repair, retinal neovascularization, macular degeneration, corneal graft rejection, contact lens overwear, Crohn's disease, non-immune inflammation, contact lens overwear, crohn's disease, non-immune inflammation, contact lens overwear, systemic lauge erythromatosus, thyroiditis, coodparture's syndrome, systemic lugue erythromatosus, thyroiditis, coodparture's syndrome, systemic vasculitis, scleroderma, Sjorgen's unanche used for treating/inhibiting tumor growth especially
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                                                                                                                                                                                                                                     Inhibiting endothelial call growth and angiogenesis using calreticulin, useful for suppressing tumor growth
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100.0%; Pred. No. 3.7e-25;
1ve 0; Mismatches 0;
                                                                                           (USSH ) US DEPT HEALTH & HUMAN SERVICES.
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                                                                                                                                                                                                                                                                                                             Claim 4; Page 85; 99pp; English.
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99WO-US23240
                                              98US-0103438
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Kaposi's sarcoma (claimed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 100.
Matches 43; Conservative
                                                                                                                                          Yao
                                                                                                                                          Cosato G, Pike SE,
                                                                                                                                                                                         WPI; 2000-303767/26
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05-OCT-1999;
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RESULT 11 AAY92355

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RESULT 13 AAB66343

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Protein identification; signal transduction pathway; metabolic pathway; hybridisation assay; genetic mapping; gene expression control; promoter;
                                            5 GDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIVRPD 60
                                                                                                                                                                                                                      Arabidopsis thaliana protein fragment SEQ ID NO: 28351.
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99US-0123180.
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99US-0125788.
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99US-0132486.
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   Matches 34; Conservative
                                                                                                                                                                                                                                                                                                            Arabidopsis thaliana
                                                                                                                                                                                                                                                                                termination sequence
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16-JUN-1999;
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                           The present invention provides the protein and coding sequences for the castor bean calreticulin protein and the calreticulin promoter sequence. In addition, the castor bean calnexin protein, coding sequence and promoter are also described. Calreticulin and calnexin are calcium binding proteins found in the endoplasmic reticulum (er). The calreticulin promoter sequence can be used in vectors to promote the expression of foreign genes, particularly resistance genes, in plant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The present invention provides the protein and coding sequences for the castor bean calreticulin protein and the calreticulin promoter sequence. In addition, the castor bean calnexin protein, coding sequence and promoter are also described. Calreticulin and calnexin are calcium binding proteins found in the endoplasmic reticulum (er). The calreticulin promoter sequence can be used in vectors to promote the expression of foreign genes, particularly resistance genes, in plant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New nucleic acid molecules encoding a calcium binding chaperone protein in endoplasmic reticulum, calreticulin, and calreticulin promoter sequences, useful for producing foreign gene products in plant cells -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         calreticulin; calcium binding; er; endoplasmic reticulum;
                                                                                                                                                                                                                                     Gaps
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                                                                                                                                                                                                       Score 202; DB 22; Length 415; Pred. No. 1.5e-19;
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Pred. No. 1.5e-19;
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                                                                                                                                                                                                                                                                                                                                                                     AAB66343 standard; Protein; 415 AA
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Claim 1; Fig 3; 45pp; English.
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N-PSDB; AAF29755.
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les 34; Conser
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Best Local Similarity
                                                                                                                                                            415 AA;
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16-JUN-1999)
18-JUN-1999)
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990S-0139463.
990S-0139750.
990S-0139753.
990S-013981763.
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990S-0140823.
990S-0140991.
990S-0141287.
990S-0141842.
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99US-0142390.
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99US-0147038.
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99US-0145145
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20-AUG-1999;
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22-JUN-1999;
23-JUN-1999;
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                                                                                   Protein identification; signal transduction pathway; metabolic pathway; hybridisation assay; genetic mapping; gene expression control; promoter; termination sequence.
                                                                  Arabidopsis thaliana protein fragment SEQ ID NO: 60470.
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                                                                                                                     Arabidopsis thaliana
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                                  AAG47933;
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PR 20-AuG-1999 9908-014999 PR 23-AuG-1999 9008-014990 PR 23-AuG-1999 9008-011990 PR 23-AuG-1999 9008-011990 PR 27-AuG-1999 9008-0110065 PR 27-AuG-1999 9008-0110065 PR 27-AuG-1999 9008-0110065 PR 27-AuG-1999 9008-0110065 PR 27-AuG-1999 9008-0110066 PR 27-AuG-1999 9008-0110066 PR 27-AuG-1999 9008-0110066 PR 27-AuG-1999 9008-0113009 PR 21-SEP-1999 9008-0113070 PR 21-
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Search completed: January 9, 2002, 15:01:12 Job time: 158 sec

Query Match 57.1%; Score 194; DB 21; Length 312; Bost Local Similarity 60.7%; Pred. No. 1.4e-18; Mutches 34; Conservative 7; Mismatches 15; Indels 0; Gaps

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Sequence 6,
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/cgn2_6/ptodata/2/laa/PCTUS_COMB.pep:*
/cgn2_6/ptodata/2/laa/backfiles1.pep:*
GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              : /cgn2_6/ptodata/2/1aa/5A_COMB.pep:*
: /cgn2_6/ptodata/2/1aa/5B_COMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-1100-664A-10
US-09-687-898-4
US-08-307-499-28
US-07-813-593-2
US-07-977-451-2
US-07-977-451-2
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US-08-295-362-2
US-08-378-761A-78
US-08-485-286-78
US-07-901-707-7
US-07-988-430-7
US-08-425-336-7
US-08-417-4848-7
US-08-417-4848-7
US-08-646-360-7
US-08-646-360-7
US-09-166-380-7
US-09-166-380-7
US-09-166-380-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PCT-US92-05401-2
                                                                                                                                                                                                                                                                                                                                                                                                                                212252 seqs, 22503292 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SUMMARIES
                                                                                                                                             2002, 14:59:42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Post-processing: Minimum'Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                          protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                   BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Issued_Patents_AA:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      seq length: 0 seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query
Match Length DB
                                                                                                                                             January
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Perfect score:
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                                                                                                                                                                                                                                                                                                                                                     Scoring table:
                                                                                          OM protein
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Maximum DB
                                                                                                                                                                                                                                                                                                   Sequence:
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                                                                                                                                             Run on:
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APPLICANT: Coughlan, Sean J.
APPLICANT: Winfrey, Jr., Ron J.
TITLE OF INVENTION: CALRETICULIN AND CALNEXIN GENES AND PROMOTER REGIONS AND US
NUMBER OF SEQUENCES: 16
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
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  Sequence 2, Al Sequence 5, Al Sequence 5, Al Sequence 8, Al Sequence 8, Al Sequence 8, Al Sequence 10, Al Sequence
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                                                                                                                                                                                                                                                                                                                                                                                  Sequence 10,
Sequence 11,
Sequence 12,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SCENAIRS SIGNATION 1.25
SCHWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/675,816
FILING DATE: 05-JUL-1996
CLASSIFICATION: 435
PCT-US92-09893-2
US-08-22-299-2
US-08-434-898-2
PCT-US95-03718-2
US-08-88-236-9
US-08-89-05701-20
PCT-US93-05701-20
PCT-US93-05701-20
PCT-US93-05705-5
US-08-454-097-8
US-08-454-097-8
US-08-447-500-10
US-08-447-500-10
US-08-447-500-10
US-08-447-500-10
US-08-453-866-8
US-08-447-500-10
US-08-453-866-10
US-08-453-866-10
US-08-453-866-10
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US-08-185-359-12
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: No. 6171864 tenburg, Carol
REGISTRATION NUMBER: 39,317
REFERENCE/DOCKET NUMBER: 750027.40
TELECOMMUNICATION INFORMATION:
TELEPAX: (206-662-4900
TELEFAX: (206-682-6901
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE: Seed and Berry
STREET: 701 Fifth Ave. Suite 6300
CITY: Seattle
STATE: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY: U.S.A.
ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; Sequence 2, Application US/08675816; Patent No. 6171864; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 415 amino acids
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Matches 34; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     amino acid
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     116.0
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                                                                                                                  53.5
53.5
53.5
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GENERAL INFORMATION:

APPLICANT: WALSH, TERENCE A

APPLICANT: WALSH, TERENCE A

APPLICANT: WALSH, TERENCE A

APPLICANT: WORGAN: ALICE ER

TITLE OF INVENTION: PRECURSOME-INACTIVATING PROTEINS, INACTIVE

TITLE OF INVENTION: USING

NUMBER OF SEQUENCES: 81

CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 593;
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MEDIUM TYPE: Floppy disk
COMPUTER: Floppy disk
COMPUTER: EN PC COMPATIBLE
COMPUTER: TBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/378,761A
FILING DATE: 26-JAN-1995
CLASSIFICATION: 435
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/296,362
FILING DATE: 25-AUG-1994
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 120.5; DB 1;
Pred. No. 5.1e-08;
8; Mismatches 22;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 78, Application US/08378761A Patent No. 5635384
                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
NAME: Deehr, Manya S.
REGISTRATION UNUBER: 37,120
REFERENCE/DOCKET NUMBER: 6900
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 622-4900
TELER: 3723836
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 593 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE: ANDREA T. BORUCKI
STREET: 9330 ZIONSVILLE ROAD
CITY: INDIANAPOLIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: BORUCKI, ANDREA T
REGISTRATION NUMBER: 33651
REFERENCE/DCOKET NUMBER: 3
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 35.4%;
Best Local Similarity 39.7%;
Matches 27; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-296-362-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ||||: |||
240 TLILNPDN 247
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US-08-378-761A-78
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                                                                                       GENERAL INFORMATION:
APPLICANT: COUGhlan, Sean J.
APPLICANT: Winfrey, Jr., Ron J.
TITLE OF INVENTION: CALETICULIN AND CALNEXIN GENES AND PROMOTER REGIONS AND USES NUMBER OF SEQUENCES: 16
CORRESPONDENCE ADDRESS:
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
APPLICANT: Bergeron, John J.M.
APPLICANT: Thomas, David Y.
APPLICANT: Thomas, David Y.
APPLICANT: Wada, INVENTION:
APPLICANT: Wada, INVENTION:
APPLICANT: Wada, INVENTION:
TITLE OF INVENTION: PROTEIN TRAFFICKING DISORDERS AND INCREASING SECRETORY
TITLE OF INVENTION: PROTEIN PRODUCTION
NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and BERRY
STREET: 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ..
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             36.9%; Score 125.5; DB 4; Length 542; 42.4%; Pred. No. 9.7e-09; Live 8; Mismatches 23; Indels 7;
                                                                                                                                                                                                              CORRESPONDENCE ADDRESS:
ADDRESSE: Seed and Berry
STREET: 701 Fifth Ave. Suite 6300
CITY: Seattle
STREET: Washington
COUNTR: U.S.A.
ZIP: 98104-7092
COMPUTER: READALE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: READALE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: BM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: BA PC-DOS/MS-DOS
SOFTWARE: BA PC-DOS/MS-DOS
SOFTWARE: PATCHIN DATA:
APPLICATION NUMBER: US/08/675,816
FILING DATE: 05-JUL-1996
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: NO. 611864 chouly, Carol
RECISTRATION NUMBER: 39,317
TELEPHONE: (206-622-4900
TELEPHONE: C206-622-4900
TELEPHONE: C206-622-4900
TELEPHONE: C206-622-4900
TELEPHONE: AS BOO ID NO: 6:
SEQUENCE CHARACTERISTICS:
LEMEGTH: 542 amino acids
TYPE: amino acids
TYPE: amino acid
                                               Sequence 6, Application US/08675816 Patent No. 6171864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Skyuence 2, Application US/08296362
Patent No. 5691306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 42.4
Matches 28; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CITY: Scattle
STATE: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY: US
ZIP: 98104-7092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  190 ILKPDN 195
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                   US-08-675-816-6
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32 YNIPLLLPSVSGAGRYLLMHLFNYDGKTITVAVDV----

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INFORMATION FOR SEQ ID NO:

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APPLICANT: Better, Marc D.
APPLICANT: Carroll, Steve F.
APPLICANT: Carroll, Steve F.
APPLICANT: Lane, Julie A.
TITLE OF INVENTION: Materials Comprising and Methods of
NUMBER OF SEQUENCES: 57
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
APPLICANT: Bernhard, Susan L.
APPLICANT: Better, Marc D.
APPLICANT: Carroll, Stephen F.
APPLICANT: Lei, Shau-Ping
TITLE OF INVENTION: Materials Comprising and Methods of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9 YNI-MFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTL 55
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CURRENT APPLICATION DATA:
APPLICATION DATA:
TELING DATE: 19920619
CLASSIFICATION DATE: 05/07/901,707
FILING PAPLICATION DATE: 05/07/901,707
FILING DATE: 04-NOV-1991
ATTON NUMBER: 05 07/787,567
FILING DATE: 04-NOV-1991
ATTON NEVAGENT INFORMATION:
NAME: NO. 5376546and, Greta E.
REGISTRATION NUMBER: 35,302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & ADDRESSEE: Bicknell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STREET: Two First National Plaza, 20 South Clark STREET: Street
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 7, Application US/07988430 Patent No. 5416202
                                                                                                                                  Sequence 7, Application US/07901707
Patent No. 5376546
GENERAL INFORMATION:
APPLICANT: Bernhard, Susan L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEPHONE: (312) 346-5750
TELEFAX: (312) 984-5750
TELEX: 25-3856
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHRACTERISTICS:
LENGTH: 263 amino acids
TYPE: AMINO ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FELECOMMUNICATION INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE/DOCKET NUMBER:
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CITY: Chicago
STATE: Illinois
COUNTRY: USA
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                                                                   RESULT 6
US-07-901-707-7
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Sequence 78, Application US/08485286

Patent No. 5646026

APPLICANT: WALSH, TERENCE A

APPLICANT: MORGAN, ALICE ER

TITLE OF INVENTION: RIBOSOME-INACTIVATING PROTEINS, INACTIVE

TITLE OF INVENTION: USING

NUMBER OF SEQUENCES: 81

CORRESPONDENCE ADDRESS:

ADDRESSE: ANDREA T. BORUCKI

STREET: 9330 ZIONSVILLE ROAD

CITY: INDIANAPOLIS

STATE: IN

COUNTRY: US
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                                                                                                                                                                                                                                                                                                                        DB 1; Length 250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9 YNI-MFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTL 55
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/485,286
                                                                                                                                                                                                                                                                                                                     17.1%; Score 58; DB 29.2%; Pred. No. 4.2; tive 10; Mismatches
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/378761
FILING DATE: 26-JAN-1995
ATTORNEY/AGENT INFORMATION:
NAME: BORUCKI, ANDREA T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ZIP: 46268
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
CMEDUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELECOMMUNICATION INFORMATION:
TELEPHONE: (317) 337-4846
INFORMATION FOR SEQ ID NO: 78:
SEQUENCE CHARACTERISTICS:
LENGTH: 250 amino acids
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REGISTRATION NUMBER: 33651
REFERENCE/DOCKET NUMBER: 38
                      LENGTH: 250 amino acids
TYPE: amino acid
STRANDEDNES: single
TOPOLOGY: linear
MOLECULE TYPE: protein
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Best Local Similarity 29.2%
Matches 14; Conservative
                                                                                                                                                                                                                                                                                                                     Query Match 17.19
Best Local Similarity 29.29
Matches 14; Conservative
SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            single
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US-08-485-286-78
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE/DOCKET NUMBER: 31.
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312/474-6406
TELEFA: 312/474-0448
TELEX: 25-3856
INFORMATION FOR SEQ ID NO: 7:
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LENGTH: 263 amino acids
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COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
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Best Local Similarity
Matches 14; Conserva
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-488-113B-7
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STATE:
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      Preparation and Use for Ribosome-Inactivating Proteins 101
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APPLICANT: Better, Marc D.
APPLICANT: Carroll, Stephen F.
APPLICANT: Studnika, Gary M.
APPLICANT: Studnika, Gary M.
TITLE OF INVENTION: Immunotoxins Comprising Ribsome-Inactivating
TITLE OF INVENTION: Proteins
NUMBER OF SEQUENCES: 140
CORRESPONDENCE ADDRESS:
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun
STREET: 6300 Sears Tower, 233 South Wacker Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .;
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                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDLUM TYPE: FLOPPY disk
MEDLUM TYPE: FLOPPY disk
COMFUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Putentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/988,430
FLILNG DATE: 19921209
CLASSIFICATION NUMBER: US 07/901,707
FLILNG DATE: 19921209
FLILNG PAPLICATION DATA:
APPLICATION NUMBER: US 07/901,707
FLILNG DATE: 19-UNN-1992
PRIOR APPLICATION NUMBER: 33302
FLILNG DATE: 40-NOV-1991
ATTORNEY/AGENT INFORMATION:
ATTORNEY/AGENT INFORMATION:
TELEPHONE: (312) 346-5750
                                                                                           ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & ADDRESSEE: Bicknell
STREET: Two First National Plaza, 20 South Clark
STREET: Street
STREET: Street
CITY: Chicago
STATE: 1llinois
COUNTRY: USA
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IBM PC compatible
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Best Local Similarity 29.2%
Matches 14; Conservative
TITLE OF INVENTION: Pre
NUMBER OF SEQUENCES: 1(
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; MOLECULE TYPE: protein
US-07-988-430-7
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ZIP: 60606-6402
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
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Gaps
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Patent No. 5744580
GENERAL INFORMATION:
APPLICANT: Better, Marc D.
APPLICANT: Studinks, Gary M.
TITLE OF INVENTION: Proteins
NUMBER OF SEQUENCES: 169
CORRESPONDENCE ADDRESS:
ADDRESSEE: MAANdrews, Held & Malloy, Ltd.
STREET: 5100 West Madison Street, 34th floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .;
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/488,113B
FILING DATE: 07-JUN-1995
CLASSIFICATION: 330
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/425,336
FILING DATE: 18-APR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/064,691
APPLICATION NUMBER: US/08/425,336
FILING DATE: 18-APR-1995
CLASSIFICATION: 530
FILOR APPLICATION DATA:
APPLICATION NUMBER: 08/064,691
FILING DATE: 12-MAY-1993
APPLICATION NUMBER: US 07/901,707
FILING DATE: 19-JUN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/787,567
FILING DATE: 04-NOV-1991
ATTORNEY AGENT INFORMATION:
NAME: MEGISTATION NUMBER: P-36,989
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Gaps
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APPLICANT: Better, Marc D.
APPLICANT: Carroll, Stephen F.
APPLICANT: Standika, Gary M.
TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
TITLE OF INVENTION: Proteins
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                                                                                                                                                                                                                             11022US07/200-70.P3.C2A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3: McAndrews, Held & Malloy, Ltd.
500 West Madison Street, 34th floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRICEATION DATA:
APPLICATION DATA:
APPLICATION NUMBER: PCT/US94/05348
FILING DATE: 12-MAY-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/064,691
FILING DATE: 12-MAY-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/988,430
FILING DATE: 09-DEC-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/901,707
                                                                  PELLING DATE: 04-NOV-1991
ATTORNEY/AGENT INFORMATION:
NAME: MCANICHOLAS, Janet M.
REGISTRATION NUMBER: 32,918
REFERNCE/DOCKET NUMBER: 11022USO7/2
TELEPHONE: 312/707-9155
TELEPHONE: 312/707-9155
TELEX: 650 388-1248
INFORMATION FOR SEQ ID NO: 7:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Ve
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/646,360
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APPLICATION DATA:
APPLICATION NUMBER: US 07/787,567
FILING DATE: 04-NOV-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 7, Application US/08646360 Patent No. 5837491
               FILING DATE: 19-JUN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07
                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 263 amino acids TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-477-484B-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES: CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 14; Conserva
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CITY: Chicago
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ZIP: 60661
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-646-360-7
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 11
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APPLICANT: Better, Marc D.
APPLICANT: Carroll, Stephen F.
APPLICANT: Studika, Gary M.
TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .,
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29.2%; Pred. No. 4.5;
tive 10; Mismatches 16; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9 YNI-MFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTL 55
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APPLICATION NUMBER: US 07/988,430
FILING DATE: 09-DEC-1992
PRIOR APPLICATION DATA:

PRIOR APPLICATION NUMBER: US 07/901,707
FILING DATE: 19-JUN-1992
PRIOR APPLICATION NUMBER: US 07/787,567
FILING DATE: 19-JUN-1991
ATTORNEY/AGENT INFRARATION:
NAME: MCNIcholas, Janet M.
REGISTRATION NUMBER: 32,918
REFERENCE/DOCKET NUMBER: 32,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/477,484B
FILING DATE: 07-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES: 169
CORRESPONDENCE ADDRESS:
ADDRESSEE: MCANDITEWS, Held 6 Malloy, Ltd.
STRRET: 500 West Madison Street, 34th floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION UNBER: US 08/425,336
FILING DATE: 18-APR-1995
PRIOR APPLICATION NUMBER: US 08/064,691
FILING DATE: 12-MAY-1993
PRIOR APPLICATION NUMBER: US 07/988,430
FILING DATE: 09-DEC-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/901,707
APPLICATION NUMBER: US 07/901,707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ZIP: 60661
COMPUTER REAABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 7, Application US/08477484B Patent No. 5756699
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Matches 14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY: linear
MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CITY: Chicago
STATE: Illinois
COUNTRY: USA
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US-08-477-484B-7
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ò q Gaps

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APPLICANT: Better, Marc D.
APPLICANT: Carroll, Stephen F.
APPLICANT: Studnika, Gary M.
APPLICANT: Studnika, Gary M.
TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating TITLE OF INVENTION: Proteins
NUMBER OF SEQUENCES: 173
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                Query Match 17.1%; Score 58; DB 4; Length 263; Best Local Similarity 29.2%; Pred. No. 4.5; Matches 14; Conservative 10; Mismatches 16; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                              9 YNI-MEGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTL 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                             32 YNIPLLLPSVSGAGRYLLMHLFNYDGKTITVAVDV-----TNVYIM 72
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ZIP: 60601

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: 1BM PC COMPATIBLE
COMPUTER: PATENTION PC-POS/MS-DOS
SOFTWARE: PATENTION Release #1.0, Version #1.25
CURRENT APPLICATION NUMBER: US/09/136,389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          E: McAndrews, Held & Malloy, Ltd.
500 West Madison Street, 34th floor
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CLASSIFICATION DIATA:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/646,360
APPLICATION NUMBER: 08/646,360
APPLICATION NUMBER: PCT/US94/05348
FILING DATE: 12-MAY-1994
PRIOR APPLICATION DATA:
FILING DATE: 19-JUN 1992
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 7, Application US/09136389
Patent No. 6146850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: McNicholas, Janet M. REGISTRATION NUMBER: 32,918
                                  TELEX: 650 388-1248
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
LENGTH: 263 anino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEX: 650 388-1248
INFORMATION FOR SEQ ID NO: 7:
              312/707-9155
                                                                                                                                                                         TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-839-765-7
                                                                                                                                                     amino acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chicago
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              TELEFAX:
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APPLICANT: Better, Marc D.
APPLICANT: Carroll, Stephen F.
APPLICANT: Carroll, Stephen F.
APPLICANT: STANDIAL GALY M.
TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
TITLE OF INVENTION: Proteins
NUMBER OF SEQUENCES: 169
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .;
6
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  16; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9 YNI-MFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTL 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION DATA:
SOFTWARE PATENTIN STATES
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/839,765
FILING DATE: 105-APR-1997
CLASSIFICATION S30
PRIOR APPLICATION NUMBER: US 08/425,336
FILING DATE: 18-APR-1995
PRIOR APPLICATION NUMBER: US 08/64,691
FILING DATE: 18-APR-1993
PRIOR APPLICATION NUMBER: US 07/984,430
FILING DATE: 09-DEC-1992
PRIOR APPLICATION NUMBER: US 07/984,430
FILING DATE: 09-JUN-1992
PRIOR APPLICATION NUMBER: US 07/901,707
FILING DATE: 19-JUN-1992
PRIOR APPLICATION NUMBER: US 07/901,707
FILING DATE: 19-JUN-1992
PRIOR APPLICATION NUMBER: US 07/977,567
FILING DATE: US 07/977,567
FILING DATE: US 07/97,567
FILING DATE: US 07/97,567
FILING DATE: US 07/97,567
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REGISTRATION NUMBER: 32,918
REGISTRAPOCKET NUMBER: 11022US09/200-70.P3.C3
TELECOMMUNICATION IMPORMATION:
TELEPHONE: 312/707-8889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE: McAndrews, Held & Malloy, Ltd.
STREET: 500 West Medison Street, 34th floor
CITY: Chicago
COUNTE: Illinois
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10; Mismatches
NAME: MCNicholas, Janet M.
REGISTRATION UNBER: 32,918
REFERENCE/DOCKET NUMBER: 200-70.P4
TELEPHONE: 312/707-8889
TELEPHONE: 312/707-8889
TELERA: 312/707-9155
TELEX: 650 388-1248
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
LEMGTH: 263 antho acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-839-765-7; Sequence 7, Application US/08839765; Patent No. 6146631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rest Local Similarity 29.2%
Matches 14; Conservative
                                                                                                                                                                                                                                                                                                        TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-646-360-7
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us-09-828-000-4.rai

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9 YNI-MFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTL 55
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APPLICANT: KLOSS, BRIAN
APPLICANT: BLAU, JUSTIN
APPLICANT: PRICE, JEFFREY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     319 amino acids
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NO
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CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                              STATE: New Jersey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: amino acid
STRANDEDNESS: sir
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                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     USA
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MOLECULE TYPE:
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130 KPDN 133
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                                                                                                                     RESULT 15
US-09-100-664A-10
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH:
                                                                                                                                                                                  ; Patent No.
                                                      QQ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION: Materials Comprising and Methods of TITLE OF INVENTION: Materials Comprising and Use for Ribosome-Inactivating Proteins NUMBER OF SEQUENCES: 101
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2
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                                                                                                                                                           Query Match 17.1%; Score 58; DB 4; Length 263; Best Local Similarity 29.2%; Pred. No. 4.5; Matches 14; Conservative 10; Mismatches 16; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 5; Length 263;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            16; Indels
                                                                                                                                                                                                                                           9 YNI-MFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTL 55
                                                                                                                                                                                                                                                                    32 YNIPLLLPSVSGAGRYLLMHLFNYDGKTITVANDV-----TNVYIM 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & ADDRESSEE: Bicknell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STREET: Two First National Plaza, 20 South Clark STREET: Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: TBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
APPLICATION DATA:
APPLICATION UNMER: PCT/US92/09487
FILING DATE: 19921104
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/901,707
FILING DATE: 19-JUN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/787,567
FILING DATE: 04-NOV-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                             Sequence 7, Application PC/TUS9209487
GENERAL INFORMATION:
APPLICANT: Bernhard, Susan L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   31133
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REGISTRATION NUMBER: 35302
REFERENCE/DOCKET NUMBER: 3113
TELECOMMULTAATION INFORMATION:
TELEFAX: (312) 346-5750
TELEFAX: (312) 984-9740
TELEFAX: 25-3856
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
LENGTH: 263 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Better, Marc D.
APPLICANT: Carroll, Stephen F.
Carroll, Stephen F.
APPLICANT: Lane, Julie A.
APPLICANT: Lei, Shau-Ping
SEQUENCE CHARACTERISTICS:
LENGTH: 263 amino acids
FYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-09-136-389-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            : 263 amino acids
AMINO ACID
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Best Local Similarity 29.2
Matches 14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE: protein PCT-US92-09487-7
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COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CITY: Chicago
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60603
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: A NOVEL CLOCK GENE AND METHODS OF USE TITLE OF INVENTION: THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 319;
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32 YNIPLLLPSVSGAGRYLLMHLFNYDGKTITVAVDV-----TNVYIM 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/100,664A FILING DATE: 19-JUN-1998 CLASSIFICATION: 435 ATCHERY/AGENT INCOLUMBER ATCHERY/AGENT INCO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 3;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTORNEY/AGENT INFORMATION: '
NAME: Jackson Esq., David A.
REGISTRATION NUMBER: 26,742
REFERENCE/DOCKET NUMBER: 600-1-221
TELECOMMUNICATION INFORMATION:
TELEPHONE: 201-487-5800
TELEPK: 133521
INFORMATION FOR SEQ ID NO: 10:
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                                                                                                                                                                                                                                                                                                                                                 Sequence 10, Application US/09100664A Patent No. 6057129
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-
SOFTWARE: PatentIn Release #
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CORRESPONDENCE ADDRESS:
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Best Local Similarity
Matches 15; Conserv
TOPOLOGY:
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                                                      Search time 38.34 Seconds (without alignments)
15.847 Million cell updates/sec
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Sequence 17, Appl
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/cgn2_6/ptodata/2/iaa/5B_COMB.pep:*
/cgn2_6/ptodata/2/iaa/6A_COMB.pep:*
/cgn2_6/ptodata/2/iaa/6B_COMB.pep:*
/cgn2_6/ptodata/2/iaa/PCTUS_COMB.pep:*
/cgn2_6/ptodata/2/iaa/PCTUS_COMB.pep:*
                Compugen Ltd
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US-08-428-823-17

US-08-428-823-17

US-08-208-036-14

US-08-939-6573-14

US-08-939-6573-14

US-09-115-395-23

US-09-115-395-23

US-08-115-395-23

US-08-946-67

US-08-946-967-2

US-08-94-183-10
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3-08-117-952-757
5-08-378-761A-78
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                                                                                                       CGPGTKKVHVIFNYKGKNVLINKDIRC 27
       GenCore version 4.5
Copyright (c) 1993 - 2000 Comp
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                                                       9, 2002, 14:59:43
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Maximum Match 100%
Listing first 45 summaries
                                       protein search, using sw model
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Gapop 10.0 , Gapext 0.5
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                                                                                                                                                                                 seq length: 0
seq length: 2000000000
                                                                                    US-09-828-000-5
151
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                                                       January
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Match
                                                                                                                                                                                                                                                                                                                                                                                 43.5
                                                                                       Title:
Perfect score:
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                                                                                                                        Scoring table:
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Maximum DB:
                                        protein
                                                                                                        Sequence:
                                                                                                                                                Searched:
                                                       Run on:
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Sequence 2, Application US/08675816;
Patent No. 6171864
GENERAL INFORMATION:
APPLICANT: Coughlan, Sean J.
APPLICANT: Winfrey, Jr., Ron J.
TITLE OF INVENTION: CALRETICULIN AND CALNEXIN GENES AND PROMOTER REGIONS AND
NUMBER OF SEQUENCES: 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
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CITY: Seattle
STATE: Washington
COUNTRY: U.S.A.
ZIP: 98104-7092
COMPUTER READBLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/675,816
FILING APPLE : CS-JUL-1996
FILING APPLE: OS-JUL-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 82; DB 4; Le
Pred. No. 0.00013;
US-08-477-484B-7
US-08-646-360-7
US-08-8136-380-7
US-09-8136-389-7
PCT-US92-09487-7
US-09-032-315-3
US-09-993-315-3
US-09-396-260-3
US-09-396-260-3
US-08-36-281-3
US-08-36-281-3
US-08-46-123-4
US-08-441-147-4
PCT-US95-07536-4
US-08-441-147-4
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REFERENCE/DOCKET NUMBER: 750027.401
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206-622-4900
TELEFAX: (206)-682-6031
INFORMATION FOR SEQ ID NO: 2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  138 CGYSTKKVHAILNYNDTNHLIKKEVPC 164
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE: Seed and Berry
STREET: 701 Fifth Ave. Suite
CITY: Seattle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     54.3%; Sc
ilarity 55.6%; Pr
Conservative 2;
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             Sequence 17, Application US/08208036
| Batent No. 5436326
| GENERAL INFORMATION:
| STATE OF INVENTION: WETHOD FOR CLONING OF A GENE FOR POI I TYPE
| TITLE OF INVENTION: DA POLYMERASE
| TITLE OF INVENTION: DA POLYMERASE
| NUMBER OF SEQUENCES: 17
| CORRESPONDENCE ADDRESS: CONREST: D.C. COUNTRY: U.S.A. STREET: D.C. COUNTRY: U.S.A. COUNTRY: U.S.A. COUNTRY: READABLE FORM:
                                                                                                                                                                                                                                                                                                  MEDIUM TYPE: Diskette, 5.25 inch, 500 kb COMPUTER: IBM Compatible OPERATING SYSTEM: MS-DOS SOFTWARE: DISPLAYMITE CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/208,036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEX:
INFORMATION FOR SEQ ID NO: 17:
SEQUENCE CHARACTERISTICS:
LENGTH: 593 amino acid residues
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
HYPOTHETICAL:
                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/07/887,282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
ATORNEYAGENT INFORMATION:
NAME: WATERN N. Check, Jr.
REGISTRATION NUMBER: 33,367
REPERENCE/POCKET UNBER:
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-371-8850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY:
LOCATION:
LDCATION:
IDENTIFICATION METHOD:
OTHER INFORMATION:
AUTHORS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     POSITION IN GENOME:
CHROMOSOME/SEGMENT:
MAP POSITION:
UNITS:
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INDIVIDUAL ISOLATE:
DEVELOPMENTAL STAGE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ANTI-SENSE:
FRAGMENT TYPE:
ORIGINAL SOURCE:
ORGANISM:
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TISSUE TYPE:
CELL TYPE:
CELL LINE:
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CLONE:
US-08-208-036-17
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JOURNAL:
VOLUME:
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Pred. No. 19;
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Fatent No. 5753482
GENERAL INFORMATION:
APPLICANT: YOSALIZUM ISHINO et al.
TITLE OF INVENTION: METHOD FOR CLONING OF A GENE FOR ITLE OF INVENTION: POI I TYPE DNA POLYMERASE NUMBER OF SEQUENCES: A CORRESPONDENCE ADDRESS: A CORRESPONDENCE ADDRESS: A CORRESPONDENCE ADDRESS: A STATE: B OF Ifteenth Street, N.W., #700
CITY: Washington STREET, 805 Fifteenth Street, N.W., #700
CITY: Washington STREET BOC.
COUNTY: Washington STREET BOC.
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 3.5 inch, 1.44 mb
COMPUTER: WORD TERES OF THE CORPORATION DATE: A PPLICATION NUMBER: US/08/428,823
FILING DATE: APPLICATION NUMBER: STILNG DATE: A TOWNER: A STILNG DATE: A TOWNER: A STILNG DATE: A TOWNER: A STILNG DATE: A STILNG DATE: A TOWNER: A STILNG DATE: A STI
                                                                                                                                                                                                                                                                                                                                                       2; Indels
                                                                                                                                                                                                                                                                                                                                                   0; Mismatches
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LENGTH: 593 amino acid residues
TYPE: amino acid
STRANDEDNESS: single
DOCUMENT NUMBER:
FILING DATE:
PUBLICATION DATE:
RELEVANT RESIDUES IN SEQ ID NO:
US-08-208-036-17
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TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-371-8850
                                                                                                                                                                                                                                                                    32.5%;
81.8%;
                                                                                                                                                                                                                                                                    Query Match 32.5
Best Local Similarity 81.8
Matches 9; Conservative
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MOLECULE TYPE: protein
HYPOTHETICAL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INDIVIDUAL ISOLATE:
DEVELOPMENTAL STAGE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | ||||| |||
314 PDTKKVHTIFN 324
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FRAGMENT TYPE:
ORIGINAL SOURCE:
ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TISSUE TYPE:
CELL TYPE:
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US-08-428-823-17
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Gaps
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Patent No. 5436326
GENERAL INFORMATION:
APPLICANT: VOShizumi ISHINO et al.
TITLE OF INVENTION: METHOD FOR CLONING OF A GENE FOR POI I TYPE
TITLE OF INVENTION: DNA POLYMERASE
NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
ADDRESSEE: Wenderoth, Lind & Ponack
                                                                                                                                                                                                                                                                                                                                 ;
                                                                                                                                                                                                                                                                    Score 49; DB 2; Length 876;
Pred. No. 31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STREET: Wenderoth, Lind & Ponack
STREET: 805 Fifteenth Street, N.W., #700
CITY: Washington
STATE: D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 5.25 inch, 500 kb
COMPUTER: IBM Compatible
OPERATING SYSTEM: MS-DOS
                                                                                                                                                                                                                                                                                                                              0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/07/887,282
FILING DATE:
ATTOCNEY AGENT INFORMATION:
NAME: WALTEN M. Cheek, Jr.
REGISTRATION NUMBER: 33,367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: DisplayWrite CURENT APPLICATION DATA: APPLICATION NUMBER: US/08/208,036 FILING DATE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE/DOCKET NUMBER:
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-371-8850
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                                                                                                                                                                                                                                                                 Query Match 32.5%;
Best Local Similarity 81.8%;
Matches 9; Conservative
         INFORMATION FOR SEQ ID NO: 2:
                              SEQUENCE CHARACTERISTICS:
LENGTH: 876 amino acids
TYPE: amino acid
                                                                                                                 ; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-633-476-2
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DEVELOPMENTAL STAGE:
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597 PDTKKVHTIFN 607
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ORIGINAL SOURCE:
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TISSUE TYPE:
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US-08-208-036-14
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APPLICANT: Wilkosz, Richard K.
APPLICANT: Wilkosz, Richard K.
APPLICANT: Willer, Reinhold
TITLE OF INVENTION: BACILLUS STEARCHERMOPHILUS DNA POLYMERASE
NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS:
ADDRESSE: Marshall, O'Toole, Gerstein, Murray & Borun
STREET: 6300 Sears Tower, 233 South Wacker Drive
CITY: Chicago
STATE: Illinois
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Pred. No. 19;
0; Mismatches 2; Indels
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STATE: 11linois
COUNTR: 11linois
COUNTR: 60606-6402
ZIP: 60606-6402
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: 1BM PC compatible
COMPUTER: 1BM PC compatible
COMPUTER: 1 BM PC compatible
COM
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NAME: POchopien, Donald J.
REGISTRATION NUMBER: 32,167
REFERENCE/DOCKET NUMBER: 28003/32630
TELECOMMUNICATION INFORMATION:
TELECHOM: 312/474-6300
TELERAX: 312/474-0448
TELEX: 25-3856
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81.8%; Pred
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DOCUMENT NUMBER:
FILING DATE:
PUBLICATION DATE:
RELEVANT RESIDUES IN SEQ ID NO:
US-08-428-823-17
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OTHER INFORMATION:
PUBLICATION INFORMATION:
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POSITION IN GENOME:
CHROMOSOME/SEGMENT:
MAP POSITION:
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314 PDTKKVHTIFN 324
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CELL LINE:
ORGANELLE:
IMMEDIATE SOURCE:
LIBRARY:
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LOCATION:
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JOURNAL:
VOLUME:
ISSUE:
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US-08-633-476-2
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US-08-996-679-63
Sequence 63, Application US/08996679
Sequence 63, Application US/08996679
Sequence 63, Application US/08996679
GENERAL INFORMATION:
APPLICANT: Blaschuk, Orest W.
APPLICANT: Gour, Barbara J.
TITLE OF INVENTION: COMPOUNDS AND METHODS FOR MODULATING
TITLE OF INVENTION: CLL ADHESION
NUMBER OF SEQUENCES:
CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 49; DB 1; Length 877;
Pred. No. 31;
0; Mismatches 2; Indels
     INFORMATION FOR SEQ 1D NO: 14:
SEQUENCE CHARACTERISTICS:
LENGTH: 877 amino acid residues
TYPE: amino acid
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PUBLICATION DATE:
RELEVANT RESIDUES IN SEQ ID NO:
US-08-428-023-14
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81.8%;
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IDENTIFICATION METHOD:
OTHER INFORMATION:
PUBLICATION INFORMATION:
AUTHORS:
                                                                                                                                    TOPOLOGY: linear
MOLECULE TYPE: protein
HYPOTHETICAL:
ANTI-SENSE:
FRAGMENT TYPE:
ORIGINAL SOURCE:
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Best Local Similarity 81.8
Matches 9; Conservative
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DEVELOPMENTAL STAGE:
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STATE: Washington
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CELL LINE:
ORGANELLE:
IMMEDIATE SOURCE:
LIBRARY:
CLONE:
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                                                                                                        STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                              TISSUE TYPE:
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ISSUE:
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Pred. No. 31;
0; Mismatches 2; Indels
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GENERAL INFORMATION:
APPLICANT: YOSHIZUMI ISHINO et al.
TITLE OF INVENTION: METHOD FOR CLONING OF A GENE FOR
TITLE OF INVENTION: METHOD FOR CLONING OF A GENE FOR INTEL OF INVENTION: POLI I TYPE DNA POLYMERASE
CORRESPONDENCE ADDRESS:
ADDRESSEE: Menderch, Lind & Ponack
STRET: 805 Fifteenth Street, N.W., #700
CITY: Washington
STATE: D.C.
COUNTRY: U.S.A.
ZIP: 2005
COMPUTER: ISM COMPALE FORM:
MEDIUM TYPE: DISKETC, 3.5 inch, 1.44 mb
COMPUTER: ISM COMPALIDE
COMPUTER: ISM COMPALIDE
COMPUTER: APPLICATION DATA:
APPLICATION NUMBER: WOOF STATEM: APPLICATION DATA:
APPLICATION NUMBER: APPLICATION DATA:
APPLICATION DATA:
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APPLICATION NUMBER: APPLICATION DATA:
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APPLICATION NUMBER: APPLICATION DATA:
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Patent No. 5753482
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FILING DATE:
PUBLICATION DATE:
RELEVANT RESIDUES IN SEQ ID NO:
US-08-208-036-14
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NAME: Matthew Jacob
REGISTRATION NUMBER: 25,154
REFERENCE/DOCKET NUMBER:
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-371-8850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 32.5%;
81.8%;
                                                                                                                                                                                                                                      NAME/KEY:
LACATION:
LIGHTFEICATION METHOD:
OTHER INFORMATION:
PUBLICATION INFORMATION:
AUTHORS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Hest Local Similarity 81.8
Matches 9; Conservative
                                                                                                        POSITION IN GENOME:
CHROMOSOME/SEGMENT:
MAP POSITION:
UNITS:
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ORGANELLE:
IMMEDIATE SOURCE:
LIBRARY:
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JOURNAL:
VOLUME:
ISSUE:
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APPLICANT: Blaschuk, Orest W.
APPLICANT: Barbara J.
TITLE OF INVENTION: COMPOUNDS AND METHODS FOR MODULATING NEURITE OUTGROWTH
FILE REFERENCE: 100086.40123
CURRENT APPLICATION NUMBER: US/09/115,395A
CURRENT FILING DATE: 1998-07-14
EARLIER FILING DATE: 1999-07-14
EARLIER FILING DATE: 1999-07-11
EARLIER FILING DATE: 1999-07-11
EARLIER APPLICATION NUMBER: 08/893,534
EARLIER FILING DATE: 1996-07-12
EARLIER FILING DATE: 1996-07-12
SOFTWARE: PAPPLICATION NUMBER: 06/021,612
SOFTWARE: PAPENTING UNCS: 77
SOFTWARE: PATENTING UNCS: 77
LENGTH: 17
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APPLICANT: Doherry, Patrick
APPLICANT: Blaschuk, Orest W.
APPLICANT: Blaschuk, Orest W.
APPLICANT: Gour, Barbara J.
TITLE OF INVENTION: COMPOUNDS AND METHODS FOR MODULATING ADHESION MOLECULE
TITLE OF INVENTION: FUNCTION
FILE REFERENCE: 100086.403
CURRENT APPLICATION NUMBER: US/09/113,977C
CURRENT FILING DATE: 1998-07-10
NUMBER OF SEQ ID NOS: 87
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; OTHER INFORMATION: Description of Artificial Sequence: Solid Phase ; OTHER INFORMATION: Synthesis US-09-113-977C-68
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                                                                   Length 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; OTHER INFORMATION: Description of Artificial Sequence:; OTHER INFORMATION: Synthesis
US-09-115-395-23
                                                                   Score 48; DB 4;
Pred. No. 0.43;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
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; Patent No. 6277824
                                                                                                                                                                                                                                                                                                  Sequence 23, Application US/09115395A Patent No. 6207639
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                                                                 31.8%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 31.8
Best Local Similarity 43.8
Matches 7; Conservative
                                                                 Query Match 31.8
Best Local Similarity 43.8
Matches 7; Conservative
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| IWKHKGRDVILKKDVR 16
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US-08-939-853A-14
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Patent No. 6203789
GENERLI INFORMATION:
APPLICANT: Blaschuk, Orest W.
APPLICANT: Gour, Barbara J.
TITLE OF INVENTION: COMPOUNDS AND METHODS FOR REGULATING
TITLE OF INVENTION: CELL ADHESION
NUMBER OF SEQUENCES: 30
CORRESPONDENCE ADDRESS:
ADDRESSEE: 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 4; Length 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE: Patentin Release #1.0, version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/939,853A
FILING DATE: 29-SEP-1997
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: MAIL, DAVId J.
REGISTRATION NUMBER: 32,391
REFERENCE/DOCKET NUMBER: 100086.402
TELECOMMUNICATION INFORMATION:
                    MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
FILING DATE: 3-5-6C-1997
CLASSIFICATION:
                                                                                                                                                                                   ATTORNEY AGENT INFORMATION:
NAME: Maki, Daivd J.
REGISTRATION NUMBER: 31,392
REFERENCE/DOCKET NUMBER: 100086.401C1
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 622-4900
TELEFAX: (206) 682-6031
INFORMATION FOR SEQ ID NO: 63:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred. No. 0.437; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: ISH PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEPHONE: (206) 622-4900
TELEPAX: (206) 682-6031
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
LENGTH: 17 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            31.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ouery Match
Best Local Similarity 43.0.
Transport 17 Conservative
                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 17 amino acids TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11 IFNYKGKNVLINKDIR 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |::||::|::|
| IWKHKGRDVILKKDVR 16
    COMPUTER READABLE FORM:
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STATE: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY: US
ZIP: 98104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-939-853A-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; TOPOLOGY:
US-08-996-679-63
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540 White Plains Rd., POB 2005
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/361,611
FILING DATE: 12-DEC-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CIBA-GEIGY Corporation
                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER REALABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                 TELECOMMUNICATION INFORMATION:
TELEPHONE: (919) 541-8614
TELEFAX: (919) 541-8689
INFORMATION FOR SEQ ID NO: 2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   31.1%;
illarity 28.6%;
Conservative
                                                                                                                                                                                                                                                                                                                                                             NAME: Elmer, James Scott REGISTRATION NUMBER: 36,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE: CIBA-GEIGY CC
STREET: 7 Skyline Drive
CITY: Hawthorne
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH: 490 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-565-655-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              435
STREET: 540
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Best Local Similarity
Matches 10; Conserv
                                                                   X: USA
10591-9005
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    USA
                                                                                                                                                                                                                                           FILING DATE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10532
                                                                     COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STATE:
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APPLICANT: Potter, Sharon L
APPLICANT: Ward, Eric R
TITLE OF INVENTION: Plant Adenylosuccinate Synthetase and
TITLE OF INVENTION: DNA Coding Therefor
NUMBER OF SRQUENCES: 4
CORRESPONDENCE ADDRESS:
STREET: 7 Skyline Drive
CITY: Hawthorne
STATE: NY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 2, Application US/08565655
Patent No. 5688939
GENERAL INFORMATION:
APPLICANT: Potter, Sharon L
APPLICANT: Ward, Eric R
TITLE OF INVENTION: Plant Adenylosuccinate Synthetase and
TITLE OF INVENTION: DNA Coding Therefor
NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
ADDRESSEE: Ciba Patent Department
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 1; Length 490;
                                             Score 48; DB 4; Length 17;
Pred. No. 0.43;
7; Mismatches 2; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ZIP: 10532
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM FC compatible
OPPRATIS SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30B
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98 COCCANAGHTIYNSECKKFALHLVPSGILNEDTTC 132
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Pred. No. 31;
5; Mismatches
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                                                                                                                                                                                                                                                     Sequence 2, Application US/08361611 Patent No. 5519125 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTORNEY/AGENT INFORMATION:
NAME: Elmer, James Scott
REGISTRATION NUMBER: 36,129
TELECOMMULCATION INFORMATION:
TELEPHONE: (919) 541-8614
INFORMATION FOR SEQ ID NO: 2:
SEQUIENCE CHARACTERISTICS:
LENGTH: 490 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  31.1%;
28.6%;
                                             Query Match
Best Local Similarity 43.8%;
Matches 7; Conservative
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Best Local Similarity 28.6
Matches 10; Conservative
                                                                                                                                               1 : |||::|::||::|
1 IWKHKGRDVILKKDVR 16
                                                                                                                       11 IFNYKGKNVLINKDIR 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ) MOLECULE TYPE: protein US-08-361-611-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CLASSIFICATION: 536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                       US-08-361-611-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY:
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Gaps
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Sequence 2, Application US/08946967

Patent No. 5882869

GENERAL INFORMATION:
APPLICANT: Potter, Sharon L
APPLICANT: Ward, Eric R

TITLE OF INVENTION: DIANT Adenylosuccinate Synthetase and TITLE OF INVENTION: DNA Coding Therefor NUMBER OF SEQUENCES: 4

CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 47; DB 1; Length 490;
Pred. No. 31;
5; Mismatches 12; Indels
SOFTWARE: Patentin Release #1.0, Version #1.30B CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/565,655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: Patentin Release #1.0, Version #1.30B CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/946,967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98 CQGGANAGHTIYNSEGKKFALHLVPSGILNEDTTC 132
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NAME: Elmer, James Scott
REGISTRATION NUMBER: 36,129
TELECOMMUNICATION INFORMATION:
TELEPHONE: (919) 541-8614
TELEFAX: (919) 541-8689
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US-08-975-762-67
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                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: CARLOW, CLOTILDE K.S.
APPLICANT: PERLER, FRANCINE B.
APPLICANT: HONG, XIQIANG
APPLICANT: MEJIA, JHON S.
TITLE OF INVENTION: NOVEL PROTEIN FROM DIROFILARIA IMMITIS
TITLE OF INVENTION: AND METHOD FOR IMMUNODIAGNOSIS OF HEARTWORM IN MAMMALS
CORRESPONDENCES: 13
CORRESPONDENCE HONGES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
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                                                                                                                                                                           DB 2; Length 490;
                                                                                                                                                                         Score 47; DB 2; Length 490
Pred. No. 31;
5; Mismatches 12; Indels
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/836,236
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 44.5;
Pred. No. 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: WILLIAMS, GREGORY D.
REGISTRATION NUMBER: 30901
REFERENCE/DOCKET NUMBER: NEB-112C-PCT
TELECOMMUNICATION INFORMATION:
TELEPHONE: (508) 927-5054
INFORMATION FOR SEQ 1D NO: 9:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE: NEW ENGLAND BIOLABS, INC
STREET: 32 TOZER ROAD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/420,976
FILING DATE: 10-APR-1995
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ZIP: 01915
COMPUTER READABLE FORM:
MEDUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                         RESULT 14
US-08-836-236-9
; Sequence 9, Application US/08836236
; Patent No. 6103484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6 CGPQDMK---MFNFVGCSVLGNK 85
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                                                                                                                                                                       31.1%; 28.6%;
                                                                                                                                                                                                                                                          1 CGPGTKKVHVIFNYKGKNV----
              SEQUENCE CHARACTERISTICS:
LENGTH: 490 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-946-967-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 149 amino acids
                                                                                                                                                                     Query Match
Best Local Similarity 28.6
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CITY: BEVERLY
STATE: MASSACHUSETTS
COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; MOLECULE TYPE: protein US-08-836-236-9
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Best Local Similarity
Matches 11; Conserva
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Sequence 67, Application US/08975762

Patent No. 6207169

GENERAL INFORMATION:
APPLICANT: Reed, Steven G.
APPLICANT: Houghton, Raymond
TITLE OF INVENTION: COMPOUNDS AND METHODS FOR THE DIAGNOSIS AND
NUMBER OF SEQUENCES: 73
CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 44; DB 4; Length 113;
Pred. No. 16;
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                                                                                                                                                                                                                                                                                                                                                SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA: APPLICATION NOAR: US/08/975,762 FILING DATE: 21-MAR-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                12;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 GNTPLHTAASSVGKNALGNLDVLC 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTORNEY AGENT INFORMATION:
NAME: Maki, David J.
REGISTRATION NUMBER: 31,392
REFRENCE/COCKET NUMBER: 2101
TELEPHONE: 206-622-4900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INFORMATION FOR SEQ ID NO: 67:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 29.1%;
Best Local Similarity 37.5%;
Matches 9; Conservative
                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      : 113 amino acids
amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             206-682-6031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; MOLECULE TYPE: protein US-08-975-762-67
                                                                                                                                                                             ADDA...
STREET: b.v.
CITY: Seattle
...R: Washington
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Job time: 71 sec
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TOPOLOGY: lir
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STATE: Washington
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US-08-996-679-63
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Best Local Similarity
Matches 7; Conserv
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/cgn2_6/ptodata/2/laa/5B_COMB.pep:*
/cgn2_6/ptodata/2/laa/6A_COMB.pep:*
/cgn2_6/ptodata/2/laa/6B_COMB.pep:*
/cgn2_6/ptodata/2/laa/pcTUS_COMB.pep:*
/cgn2_6/ptodata/2/laa/pcTUS_COMB.pep:*
        GenCore version 4.5
Copyright (c) 1993 - 2000 Compugen Ltd
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US-09-113-955-23
US-09-113-977C-68
US-08-924-183-10
US-08-488-364-10
US-08-10-952-757
US-08-378-761A-78
US-08-378-761A-78
US-08-485-286-78
US-07-988-430-7
US-08-488-1138-7
US-08-488-1138-7
US-08-488-1138-7
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US-08-743-168B-43
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PCT-US95-05467-2
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US-08-696-268B-2
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US-09-395-115-2
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Maximum Match 100%
Listing first 45 summaries
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    protein search, using sw model

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length: 2000000000
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Maximum DB
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Patent No. 6169071
CENERAL INFORMATION:
APPLICANT: Blaschuk, Orest W.
APPLICANT: Gour, Barbara J.
TITLE OF INVENTION: COMPOUNDS AND METHODS FOR MODULATING
TITLE OF INVENTION: CELL ADHESION
NUMBER OF SEQUENCES: 63
CORRESPONDENCE ADDRESS:
ADDRESSED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 17;
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MEDTUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
APPLICATION DATA:
APPLICATION NUMBER: US/08/996,679
FILING DATE: 23-DEC-1997
US-08-857-076-15
US-08-158-735A-11
US-08-158-753A-8
US-08-459-009-8
US-08-94-84-7
US-08-94-16-8-36
US-08-459-951-8
US-08-480-273A-16
US-08-480-47-16
US-08-480-47-16
US-08-480-47-16
US-08-480-47-15
US-08-480-273A-32
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Pred. No. 0.072;
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TELEPHONE: (206) 622-4900
TELEPAX: (206) 622-4900
INFORMATION FOR SEQ ID NO: 63:
SEQUENCE CHARACTERISTICS:
LENGTH: 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 == 17 =
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NAME: MAKI, DAI'04 J.
REGISTRATION NUMBER: 31,392
REFERENCE/DOCKET NUMBER: 100
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TYPE: PRT ORGANISM: Artificial Sequence
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                                                  FEATURE:
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APPLICANT: GOUK, BALDARA J.
TITLE GOUK, BALDARA J.
TITLE COURTED TO COMPOUNDS AND METHODS FOR MODULATING NEURITE OUTGROWTH
FILE REFERENCE: 100086.40103
CURRENT APPLICATION NUMBER: 05/99/115, 395A
CURRENT PRILIC DATE: 1999-00-14
EARLIER PILING DATE: 1997-12-23
EARLIER FILING DATE: 1997-07-11
EARLIER FILING DATE: 1997-07-11
EARLIER FILING DATE: 1997-07-12
EARLIER FILING DATE: 1997-07-12
SOFTHARE: PLAND NUMBER: 60/021,612
EARLIER FILING DATE: 1997-07-12
SOFTHARE: PATON NUMBER: 06/021,612
EARLIER FILING DATE: 1997-07-12
SOFTHARE: PATON NUMBER: 06/021,612
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APPLICANT: Blaschik, orest W.
APPLICANT: Gour, Barbara J.
TITLE OF INVENTION: COMPOUNDS AND METHODS FOR REGULATING
TITLE OF INVENTION: CELL ADHESION
NUMBER OF SEQUENCES: 30
CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
STATE: Meshington
COUNTRY: USA
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Pred. No. 0.072;
7; Mismatches 2; Indels
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IS COMPATIBLE
COMPUTER: OS/OS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/OS/939,853A
FILING DATE: 29-SEP-1997
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTORNEY AGENT INFORMATION:
NAME: Maki, David J.
REGISTRATION NUMBER: 32,391
REFERENCE/DOCKET NUMBER: 100086.402
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELEFOREX: (206) 622-4900
TELEFOREX: (206) 622-6031
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
LENGTH: 17 amino acids
TYPE: amino acid
STRANDEDNESS:
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                                                                 Sequence 14, Application US/08939853A Patent No. 6203788
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Best Local Similarity 43.8
Matches 7; Conservative
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                                                                                                                 GENERAL INFORMATION:
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US-08-939-853A-14
                                          US-08-939-853A-14
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LENGTH: 17
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US-09-113-97C-68

US-09-113-97C-68

US-09-113-97C-68

Sequence 68 Application US/09113977C

Patent No. 627824

GENERAL INFORMATION:

APPLICANT: Datacty, Patrick

APPLICANT: Baschuk, Orest W.

TITLE OF INVENTION: COMPOUNDS AND METHODS FOR MODULATING ADHESION MOLECULE

TITLE OF INVENTION: COMPOUNDS AND METHODS FOR MODULATING ADHESION MOLECULE

TITLE OF INVENTION: UNMBER: US/09/113,977C

CURRENT APPLICATION NUMBER: US/09/113,977C

NUMBER OF SEQ ID NOS: 87

SOFTWARE: Patentin Ver. 2.0

SET DATACTOR OF SEQ ID NOS: 87

SET DATACTOR OF SEQ ID NOS: 87
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CTHER INFORMATION: Description of Artificial Sequence: Solid Phase; OTHER INFORMATION: Synthesis
US-09-115-395-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OTHER INFORMATION: Description of Artificial Sequence: Solid Phase OTHER INFORMATION: Synthesis US-09-113-977C-68
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APPLICANT: Elledge, Stephen J.
APPLICANT: Sanchez, Yolanda
TITLE OF INVENTION: MAMMALIAN CHECKPOINT GENES AND PROTEINS
FILE REFERENCE: 120541-1003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 496;
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                                                                                                                   Length 17
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Pred. No. 16;
                                                                                                                 Score 48; DB 4;
Pred. No. 0.072;
7; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; Sequence 10, Application US/08924183A ; Patent No. 6218109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; TYPE: PRT; CRAILSM: Schizosaccharomyces pombe
US-08-924-183-10
                                                                                                                 50.0%;
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                                                                                          Query Match
Best Local Similarity 43.00,
The Conservative
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Best Local Similarity 43.8
Matches 7; Conservative
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| IWKHKGRDVILKKDVR 16
                                                                                                                                                                                                      2 IFNYKGKNVLINKDIR 17
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
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Gaps

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GENERAL INFORMATION:
APPLICANT: Coughlan, Sean J.
APPLICANT: Winfrey, Jr., Ron J.
TITLE OF INVENTION: CALRETICULIN AND CALNEXIN GENES AND PROMOTER REGIONS AND US
NUMBER OF SEQUENCES: 16
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
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                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
RAPPLICATION NUMBER: US/08/675,816
FILING DATE: 05-JUL-1996
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 4;
19;
                                                                                                                                                                                Score 43; DB Pred. No. 2.7;
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                                                                                                                                                                                                                        6; Mismatches
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATTOREY/AGENT INFORMATION:
NAME: No. 6171864tenburg, Carol
REGISTRATION NUMBER: 39,317
REFERENCE/DOCKET NUMBER: 750027.401
TELECOMMUNICATION:
TELECHONE: (206-622-4900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE: Seed and Berry
STREET: 701 Fifth Ave. Suite 6300
CITY: Seatle
STATE: Mashington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 9 ...
US-08-378-761A-78
Sequence 78, Application US/08378761A
Patent No. 5635384
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                            %5-08-675-816-2
; Sequence 2, Application US/08675816
; Patent No. 6171864
                                                                                                                                                                              44.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INFORMATION FOR SEQ ID NO: 2: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 415 amino acids TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (206)-682-6031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS:
LENGTH: 76 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 47.1
Matches 8; Conservative
                                                                                                                                                                                                                        6; Conservative
                                                             TOPOLOGY: unknown MOLECULE TYPE: protein FRAGMENT TYPE: internal US-08-117-952-757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; MOLECULE TYPE: protein US-08-675-816-2
                                                                                                                                                                                                                                                                                        |||||::|:::
54 KGKNIVIHRDLK 65
                                                                                                                                                                                                                                                              6 KGKNVLINKDIR 17
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                                                                                                                                                                                Ouery Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY: U.S.A. ZIP: 98104-7092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY:
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1.Sequence 10, Application US/09488364

5.Sequence 10, Application US/09488364

5.Sequence 10, Application US/09488364

5.Sequence 10, Application US/09488364

5.Sequence 10, Stephen J.

6.SEMERAL INFORMATION:

7.TILE OF INVENTION: MAMMALIAN CHECKPOINT GENES AND PROTEINS

7.TILE OF INVENTION: MAMMALIAN CHECKPOINT GENES AND PROTEINS

7.CURRENT APPLICATION NUMBER: US/09/488,364

7.CURRENT FILING DATE: 2000-01-12

7.SOFTWARE PATE 2000-01-12

7.SOFTWARE PATE 10 VET. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Evans, Glen A.
APPLICANT: SMITH, Michael W.
TITLE OF INVENTION: METHOD FOR GENERATION OF SEQUENCE:
TITLE OF INVENTION: SAMPLED MAPS OF COMPLEX GENOMES
NUMBER OF SEQUENCES: 797
CORRESPONDENCE ADDRESS:
ADDRESSEE: Pretty, Schroeder, Brueggemann & Clark
STREET: 444 South Flower Street, Suite 2000
CITY: Los Angeles
STATE: CA
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 44; DB 4; Length 496
Pred. No. 16;
      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/117,952
FILING DATE: 07-SEP-1993
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/078,471
FILING DATE: 15-JUN-1993
ATTORNEY/AGENT INFORMATION:
    ÷
    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REGISTRATION NUMBER: 31,192
REFERENCE/DOCKET NUMBER: P41 9423
                                                                                                                                                                                                                                                                                                                                                                                                                                             ; TYPE: PRT
; ORGANISM: Schizosaccharomyces pombe
US-09-488-364-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
CMMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 757, Application US/08117952 Patent No. 5851760
    5.
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TELEPHONE: 619-546-4737
TELEFAX: 619-546-9392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEFAX: 619-546-9392
INFORMATION FOR SEQ ID NO: 757:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Reiter, Stephen E REGISTRATION NUMBER: 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ouery Match
Best Local Similarity 46...
7; Conservative
    7; Conservative
                                                                 :|:||||: |:| : | : | 151 LFSYKGKSRLLNSPV 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     :|:||||: |:| :
161 LFSYKGKSRLENSPV 175
                                          2 IFNYKGKNVLINKDI 16
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    Matches
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Gaps

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GENERAL INFORMATION:
APPLICANT: Bernhard, Susan L.
APPLICANT: Bertrot, Marc D.
APPLICANT: Carroll, Steve F.
APPLICANT: Lane, Julie A.
TITLE OF INVENTION: Materials Comprising and Methods of
TITLE OF INVENTION: Composition and Use for Ribosome-Inactivating Proteins
NUMBER OF SEQUENCES: 57
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
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Pred. No. 23;
1; Mismatches 5; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STREET: Two First National Plaza, 20 South Clark
STREET: Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 19920619
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/787,567
FILING DATE: 04-NOV-1991
ATYONNEY AGENT INFORMATION:
NAME: NO. 5376546and, Greta E.
REGISTRATION NUMBER: 35,302
REFERENCE/DOCKET NUMBER: 27129/30910
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECHONE: (312) 946-5750
                                                                                      CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/378761
FILING DATE: 26-JAN-1995
ATTORNEY/AGENT INFORMATION:
NAME: BORDCKI, ANDREA T
REGISTRATION NUMBER: 33651
REFERENCE/DOCKET NUMBER: 33651
TELEPHONE: (317) 337-4846
INFORMATION FOR SEQ ID NO: 78: SEQUENCE CHARACTERISTICS: TELEPHONE: 4370 JD NO: 78: SEQUENCE CHARACTERISTICS: TELEPHONE: 250 amino acids TYPE: amino acid STAPE: amino acid STAPE: amino acid STAPE: SANDEDNESS: SINGLE
                                  APPLICATION NUMBER: US/08/485,286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 7, Application US/07901707 Patent No. 5376546
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40.0%;
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Best Local Similarity 40.0
Matches 6; Conservative
CURRENT APPLICATION DATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; TOPOLOGY: linear; MOLECULE TYPE: protein US-08-485-286-78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 IFNYKGKNVLINKDI 16
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52 LFNYDGKTITVAVDV 66
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: Illinois
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                                                                        FILING DATE:
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          APPLICANT: HEY, TIMOTHY D
APPLICANT: MORGAN, ALICE ER
TITLE OF INVENTION: RIBOSOME-INACTIVATING PROTEINS, INACTIVE
TITLE OF INVENTION: PRECURSOR FORMS THEREOF, A PROCESS FOR MAKING A METHOD OF
TITLE OF INVENTION: USING
NUMBER OF SEQUENCES: 81
CORRESPONDENCE ADDRESS:
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APPLICANT: WALSH, TERENCE A
APPLICANT: WALSH, TERENCE A
APPLICANT: WALSH, TERENCE A
APPLICANT: WORGAN, ALICE ER
TITLE OF INVENTION: RIBOSOME-INACTIVATING PROTEINS, INACTIVE
TITLE OF INVENTION: USING
NUMBER OF SEQUENCES: 81
CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IRM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATUR SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US/08/378,761A FILING DATE: 26-JAN-1995 CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CITY: 1NIANAPOLIS
STATE: 1NIANAPOLIS
STATE: 1N
STATE: 1N
SCHITY: US
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; Sequence 78, Application US/08485286
; Putent No. 5646026
; Putent No. 5646026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTORNEY FACENT INFORMATION:
NAME: BORUCKI, ANDREA T
REGISTATION NUMBER: 33651
REFERENCE/DOCKET NUMBER: 3827;
TELECOMMUNICATION INFORMATION:
TELEFORM.
INFORMATION FOR SEQ ID NO: 78:
SEQUENCE CHARACTERISTICS:
LENGTH: 250 annino acid
TYPE: annino acid
TYPE: annino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                             ADDRESSER: ANDREA T. BORUCKI
STREET: 9330 ZIONSVILLE ROAD
CITY: INDIANAPOLIS
STATE: IN
COUNTRY: US
WALSH, TERENCE A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     42.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Rest Local Similarity 40.0
Matches 6; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; MOLECULE TYPE: protein US-08-378-761A-78
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52 LFNYDGKTITVAVDV 66
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MEDIUM TYPE: Floppy
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Pred. No.

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Best Local Similarity
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                        Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Better, Marc D.
APPLICANT: Carroll, Stephen F.
APPLICANT: Lat, Shau-Ping
APPLICANT: Lat, Shau-Ping
TITLE OF INVENTION: Materials Comprising and Methods of
TITLE OF INVENTION: Preparation and Use for Ribosome-Inactivating Proteins
CORRESPONDENCE ADDRESS:
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                                                                                                                                                                            Score 41; DB 1; Length 263;
Pred. No. 25;
4; Mismatches 5; Indels
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: PatentIn Release #1.0, Version #1.25
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/988,430
CLLASSIFICATION: 435
PTLING DATE: 19921209
CLLASSIFICATION: A35
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/901,707
FILING DATE: 19-7UN-1992
PRIOR APPLICATION NUMBER: US 07/787,567
FILING DATE: 04-NOV-1991
ATTORNEY/AGENT INFORMATION:
NAME: NO. 5416202and, Greta E.
REGISTRATION NUMBER: 33133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & ADDRESSEE: Bicknell STREET: Two First National Plaza, 20 South Clark STREET: Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       31133
                                                                                                                                                                                                                                                                                                                                                                                               Sequence 7, Application US/07988430 Patent No. 5416202
                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
APPLICANT: Bernhard, Susan L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE/DOCKET NUMBER: 31
TELECOMMUNICATION INFORMATION:
TELEPHONE: (312) 346-550
TELEFAX: (312) 984-9740
                                                                                                                                                                            42.7%;
INFORMATION FOR SEQ ID NO: 7: SEQUENCE CHARACTERISTICS: LENGTH: 263 amino acids TYPE: AMINO ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEX: 25-3856
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
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                                                                                                                                                       Ouery Match
Best Local Similarity 40.07
                                                                      ; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-07-901-707-7
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52 LFNYDGKTITVAVDV 66
                                                                                                                                                                                                                                                        2 IFNYKGKNVLINKDI 16
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US-07-988-430-7
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CITY: C
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42.7%; Score 41; DB 1; Length 263;

Query Match

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APPLICANT: Better, Marc D.
APPLICANT: Carroll, Stephen F.
APPLICANT: Carroll, Manunotoxins Comprising Ribsome-Inactivating TITLE OF INVENTION: Immunotoxins Comprising Ribsome-Inactivating TITLE OF INVENTION: Proteins
NUMBER OF SEQUENCES: 140
CORRESPONDENCE ADDRESS:
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                     Indels
                                                                                                                                                                                                                                                                                                                                                                          5: Marshall, O'Toole, Gerstein, Murray & 6300 Sears Tower, 233 South Wacker Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PACONTIN Release #1.0, Version #1.25
APPLICATION NATA:
FILING DATE: 18-APR-1995
                   5,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  core 41; DB 1;
red. No. 25;
Mismatches 5
ed. No. 25;
Mismatches
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 18-APR-1995
CLASSIFICATION: 530
PRIOR APPLICATION DATE: 30
PRIOR APPLICATION NUMBER: 08/064,691
FILING DATE: 12-MAY-1993
APPLICATION NUMBER: US 07/901,707
FILING DATE: 19-JUN-1992
PRIOR APPLICATION NUMBER: US 07/787,567
FILING DATE: 04-NOV-1991
ATTORNEY AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 7, Application US/08488113B Patent No. 5744580
                                                                                                                                                                                     Sequence 7, Application US/08425336 Patent No. 5621083
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Meyers, Thomas C.
REGISTRATION NUMBER: 9-36,9
REFERENCE/DOCKET NUMBER: 31
TELECOMMUNICATION INFORMATION:
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TELEFAX: 312/474-0448
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LENGTH: 263 amino acids
TYPE: amino acid
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INFORMATION FOR SEQ ID NO:
                 Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; MOLECULE TYPE: protein US-08-425-336-7
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52 LFNYDGKTITVAVDV 66
                                                      2 IFNYKGKNVLINKDI 16
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52 LFNYDGKTITVAVDV 66
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STATE: ILL.
COUNTRY: USA
TT: 60606-6402
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Illinois
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Best Local Similarity
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                                                                                                                                                RESULT 13
US-08-425-336-7
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Search completed: January 9, 2002, 14:59:44
Job time: 71 sec
                           CORRESPONDENCE ADDRESS:
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APPLICANT: Carroll, Stephen F.
APPLICANT: Cardoll, Stephen F.
APPLICANT: Studnika, Gary M.
TITLE OF INVENTION: Immunotoxins Comprising Ribosome-Inactivating
TITLE OF INVENTION: Proteins
NUMBER OF SEQUENCES: 169
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
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Pred. No. 25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NEGISTRATION NUMBER: 32,918
REGISTRATION NUMBER: 32,918
REGISTRATION NUMBER: 32,918
REPERENCE/POCKET NUMBER: 11022US07/200-70.P3.C2A
TELEPHONE: 312/707-9155
TELEPHONE: 312/707-9155
TELEPHONE: 312/707-9155
TELEPHONE: 388-1248
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
LENGTH: 263 amino acids
TENER: amino acids
TENER: 11near
                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MKDIUM TYPE: Floppy disk
COMPUTER: ISH PC compatible
OPHRATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Ralease #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                        AUDKENSEE: McAndrews, Held & Malloy, Ltd.
STREFT: 500 West Madison Street, 34th floor
CITY: Chicago
STATE: 1111nois
COUNTRY: USA
ZIP: 60661
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                                                                                                                                                                                                                                                                                                                                                                                                                       CORRENT AFFILIATION DATE:
CLASSIPLIATION NUMBER: US/08/488,113B
FILING DATE: 07-JUN-1995
CLASSIPLIATION: 530
FRICK APPLICATION DATA:
APPLICATION NUMBER: US 08/425,336
FRICK APPLICATION DATA:
APPLICATION NUMBER: US 08/064,691
FILING DATE: 12-MAY-1993
FRICK APPLICATION DATA:
APPLICATION NUMBER: US 07/988,430
FILING DATE: 09-DEC-1992
FRICK APPLICATION DATA:
APPLICATION NUMBER: US 07/901,707
FILING DATE: 19-JUN-1992
PRICK APPLICATION DATA:
APPLICATION NUMBER: US 07/901,707
FILING DATE: 19-JUN-1992
FRICK APPLICATION DATE: US 07/787,567
FILING DATE: US 07/787,567
FILING DATE: US 07/787,567
FILING DATE: US 07/787,567
FILING DATE: US 07/787,567
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Hest Local Similarity 40.0
Matches 6; Conservative
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52 I.FNYDGKTITVAVDV 66
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Pred. No. 25;
4; Mismatches 5; Indels
                                                    E: McAndrews, Held & Malloy, Ltd.
500 West Madison Street, 34th floor
                                                                                                                                                                                                                                                                                             TELEPHONE: 312/707-8889
TELEFAX: 312/707-9155
TELEX: 650 388-1248
INFORMATION FOR SEQ ID NO: 7:
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Best Local Similarity 40...
Best Local 6; Conservative
                                                                                                                                                                                                                                                                                                                                                              ) MOLECULE TYPE: protein US-08-477-4848-7
                                                 COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                  2 IFNYKGKNVLINKDI 16
                                                                                                                                                                                                                                                                                                                                                                                                                                            :||| || : |:
52 LFNYDGKTITVAVDV 66
ADDALL
STREET: Dow
CITY: Chicago
STATE: Illinois
                                                                                                                                                                                                                                                                                                                                                 amino acid
                                                                                                                                                                                                                                                                                                                                                           linear
                                COUNTRY: UZIP: 60661
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6339
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US-08-675-816-2
Query Match
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Sequence 6, Appli
Sequence 3, Appli
Sequence 16, Appl
Sequence 6, Appli
Sequence 6, Appli
Sequence 14, Appli
Sequence 327, App
                                                       Search time 38.34 Seconds (without alignments) 20.543 Million cell updates/sec
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Sequence 3, A
Sequence 3, A
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Sequence 18,
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Sequence 14,
Sequence 23,
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Sequence 1
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/cgn2_6/ptodata/2/iaa/5B_COMB.pep:*
/cgn2_6/ptodata/2/iaa/6A_COMB.pep:*
/cgn2_6/ptodata/2/iaa/6B_COMB.pep:*
/cgn2_6/ptodata/2/iaa/PCTUS_COMB.pep:*
/cgn2_6/ptodata/2/iaa/PCTUS_COMB.pep:*
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1 VIENYKGKNVLINKDIRCKDDEFTHLYTLIVRPDN 35
               Compugen Ltd
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US-08-307-499-28
US-09-299-268-28
US-08-939-853A-14
US-09-115-395-23
US-09-115-395-23
US-09-115-395-23
US-09-085-603B-3
US-09-085-603B-3
US-09-031-897-7
US-08-906-865-3
US-08-906-865-3
US-08-906-865-3
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-08-701-191A-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -08-292-549-6
-09-006-353A-14
                                                                                                                                                                      Total number of hits satisfying chosen parameters:
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US-08-467-781-2
                                                                                                                                                    212252 seqs, 22503292 residues
         GenCore version
Copyright (c) 1993 - 2000
                                                                                                                                                                                                                 Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                        9, 2002, 14:59:44
                                         OM protein - protein search, using sw model
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                                                                                                                                                                                        length: 0
length: 2000000000
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Match Length
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                                                          January
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46.5
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45.5
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Maximum DB seq
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50.5
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                                                        Run on:
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APPLICANT: Coughlan, Sean J.
APPLICANT: Winfrey, Jr., Ron J.
TITLE OF INVENTION: CALRETICULIN AND CALNEXIN GENES AND PROMOTER REGIONS AND NUMBER OF SEQUENCES: 16
CORRESPONDENCE ADDRESS:
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Sequence 4
Sequence 2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESEE: Seed and Berry
STREET: 701 Fifth Ave. Suite 6300 · CITY: Seattle
STATE: Washington
COUNTRY: U.S.A.
ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: FIDPPy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DARA:
APPLICATION NUMBER: US/08/675,816
FILING DATE: 05-JUL-1996
US-08-195-487-2
US-08-483-924-2
US-08-162-809-22
US-08-162-809-4
US-08-162-809-4
US-08-162-809-4
US-08-167-809-20
US-08-477-346-54
US-08-477-346-54
US-08-440-815-2
US-08-440-815-2
US-08-440-645A-30
US-08-449-645A-30
US-08-673-789-4
US-08-673-789-4
US-08-673-789-4
US-08-673-789-4
US-08-673-789-4
US-08-673-789-4
US-08-673-789-4
US-08-673-789-4
US-08-167-919-16
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TELECOMMUNICATION INFORMATION:
TELEPHONE: (206-622-4900
TELEPHONE: (206)-682-6031
INFORMATION FOR SEO ID NO: 2:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: No. 6171864tenburg, Carol
REGISTRATION NUMBER: 39,317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; Sequence 2, Application US/08675816
; Patent No. 6171864
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        : 415 amino acids
amino acid
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Matches 17; Conservative
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MOLECULE TYPE: protein
US-08-675-816-2
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Gaps
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APPLICANT: Will will be a served by the ser
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SOFTWARE: PAC-DOS/MS-DOS
SOFTWARE: PAC-TILIN Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/675,816
FILING DATE: 05-JUL-1996
CLASSIFICATION: 435
VITORNEY AFFORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/307,499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 58; DB 4;
Pred. No. 0.85;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE: David R. Saliwanchik
STREET: 2421 N.W. 41st Street, Suite A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
NAME: Saliwanchik, David R.
RECISTRATION NUMBER: 31,794
REPERENCE/DOCKET NUMBER: UF35.1.FWCC1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/908,241
FILING DATE: 1-UUL-1992
PRIOR APPLICATION NUMBER: US 07/908,630
FILING DATE: 29-UN-1992
CLASSIFICATION: 435
                                                                                                                                                                                                                               ATTORNEY/AGENT INFORMATION:
NAME: No. 6171864 tenburg, Carol
REGISTRATION NUMBER: 39,317
REFERENCE/DOCKET NUMBER: 750027.401
TELECOMMUNICATION:
TELEPHONE: (206-622-4900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/342,212
FILING DATE: 21-APR-1992
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 28, Application US/08307499
Patent No. 5651972
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                      : LLEPHONE: (206-622-4900
TELEFAX: (206)-682-4900
INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
LENGTH: 542 amino acids
TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30.7%;
60.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STATE: Florida
COUNTRY: U.S.A.
ZIP: 32606
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy di
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |: ||:|| |::|||
181 DKLTHVYTAILKPDN 195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; MOLECULE TYPE: protein US-08-675-816-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21 DEFTHLYTLIVRPDN 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CITY: Gainesville
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
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Patent No. 6171864
GENERAL INFORMATION:
GENERAL INFORMATION:
GENERAL INFORMATION:
GENERAL OUTLING OF INVENTION:
GENERAL OF ENDRESS:
NUMBER OF SEQUENCES:
ADDRESSE: Seed and Berry
STREET: 701 Fifth Ave. Suite 6300
CITY: Seattle
STATE: Washington
CONTRY: U.S.A.
ZIP: 98104-7092
COMPTRY: U.S.A.
ZIP: 98104-7092
COMPTRY: ENDRESS: Floppy disk
                                                                                                                                                          GENERAL INFORMATION:
APPLICANT: Bergeron, John J.M.
APPLICANT: Thomas, David Y.
APPLICANT: Wada, Ikuo
APPLICANT: Wada, Ikuo
TITLE OF INVENTION: METHODOS OF DETECTION AND TREATMENT OF
TITLE OF INVENTION: PROFEIN TRAFFICKING DISORDERS AND INCREASING SECRETORY
TITLE OF INVENTION: PROFEIN PRODUCTION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
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Pred. No. 0.16;
6; Mismatches 13; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OPERATING SYSTEM: PC-DDS/MS-LDS
SOFTWARE: Putentin Release #1.0, Version #1.25
SUSTAMEN: Patentin Release #1.0, Version #1.25
SUSTAMEN: Patentin Release #1.0, Version #1.25
APPLICATION NUMBER: US/08/296,362
FILING DATE: 25-AGG-1994
CLASSIPICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: DR-FIT, Manya S.
REGISTRATION NUMBER: 690066.401C1
TELEPHONE: (206) 622-4900
TELEPHONE: (206) 682-6031
TELEFAX: 3723836
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 593 amino acids
TYPE: amino acid
TYPOPLOGY: Infeat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -----DDEFTHLYTLIVRPDN 35
                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS: 3
ADDRESSE: SEED and BERRY
STREET: 6300 Columbia Center, 701 Fifth Avenue
STREET: Scattlc
STATE: Washington
COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                               Sequence 2, Application US/08296362 Patent No. 5691306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDIUM TYPE: Floppy disk CQMPUTER: IBM PC COMpatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             33.38;
34.18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 IFNYKGKNVLINKDIRCK--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 33.3
Best Local Similarity 34.1
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; MOLECULE TYPE: protein US-08-296-362-2
                                                                 -08-296-362-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-675-816-6
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Length 236;
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Patent No. 6169071
GENERAL INFORMATION:
APPLICANT: Barbara J.
TITLE OF INVENTION: COMPOUNDS AND METHODS FOR MODULATING
TITLE OF INVENTION: CELL ADHESION
NUMBER OF SEQUENCES: 63
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
APPLICANT: Blaschuk, Orest W.
APPLICANT: Gour, Barbara J.
TITLE OF INVENTION: COMPOUNDS AND METHODS FOR REGULATING
TITLE OF INVENTION: CELL ADHESION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 48; DB 4; Length 17;
Pred. No. 0.43;
7; Mismatches 2; Indels
                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/90£ 270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                E: SEED and BERRY LLP 6300 Columbia Center, 701 Fifth Avenue
                                                                                           DB 4;
                                                                                        26.7%; Score 50.5; Di
42.3%; Pred. No. 4.3;
tive 4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE/DOCKET NUMBER: 100086.401C1
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        UMBER: US/08/996,679
23-DEC-1997
                                                                                                                                                                                                        164 IINTYKEGDTISINIRLKCKDDIIKH 189
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                                                                                                                                                                            1 VIFNYK-GKNVLINKDIRCKDDEFTH 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
NAME: Maki, Daivd J.
REGISTRATION NUMBER: 31,392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEPHONE: (206) 622-4900
TELEFAX: (206) 682-6031
INFORMATION FOR SEQ ID NO: 63:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      25.4%;
                                                                                      Query Match
Best Local Similarity 42.34
Matches 11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 17 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 25.4
Best Local Similarity 43.8
Matches 7; Conservative
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| IWKHKGRDVILKKDVR 16
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; MOLECULE TYPE: protein US-09-299-268-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CITY: Seattle
STATE: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-08-939-853A-14
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US-08-996-679-63
                                                                                                                                                                                                                                                                                       RESULT 6
US-08-996-679-63
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STREET:
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US-09-299-268-28
Sequence 28, Application US/09299268
Sequence 28, Application US/09299268
Sequence 28, Application US/09299268
Sequence 28, Application US/09299268
Setent No. 6217882
GENERAL INFORMATION:
APPLICANT: MOYER, Richard W.
APPLICANT: Gibbs, E.P.J.
TITLE OF INVENTION: Use of Recombinant Swine Poxvirus as a TITLE OF INVENTION: Live Vaccine Vector
NUMBER OF SEQUENCES: 60
CORRESPONDENCE ADDRESS:
ADDRESSEE: David R. Saliwanchik
STRRET: 2421 NW 41st Street, Suite A-1
                                                                                                                                                                                                                                                              Query Match 26.7%; Score 50.5; DB 1; Length 236; Best Local Similarity 42.3%; Pred. No. 4.3; Matches 11; Conservative 4; Mismatches 10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CITY: Galnesville
STATE: Florida
COUNTRY: U.S.A.
ZIP: 32606
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: USPECTION NOTE:
SOFTWARE: PATENTIN Release #1.0, Version #1.25
CURRENT APPLICATION NUMBER: US/09/299,268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTORNEY/AGENT INFORMATION:
NAME: Saliwanchik, David R.
REGISTRATION NUMBER: 31,794
REFERENCE/DOCKET NUMBER: UF35.1.FWCC1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 904-375-8100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US 07/908,241
FILING DATE: 1-JUL-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/908,630
FILING DATE: 29-JUN-1992
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/342,212
FILING DATE: 21-APR-1992
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                              164 IINTYKEGDTISINIRLKCKDDIIKH 189
                                                                                                                                                                                                                                                                                                                                                   1 VIENYK-GKNVLINKDIRCKDDEFTH 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/901,127
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX: 904-372-5500
INFORMATION FOR SEQ ID NO: 28:
SEQUENCE CHARACTERISTICS:
LENGTH: 236 amino acids
TYPE: amino acid
    TELECOMMUNICATION INFORMATION:
                                        TELEFAX: 904-372-5800
INFORMATION FOR SED ID NO: 2
SEQUENCE CHARACTERISTICS:
LENGTH: 236 amino acids
TYPE: amino acid
             TELEPHONE: 904-372-5800
                                                                                                                                               TOPOLOGY: 11near

MOLECULE TYPE: protein

US-08-307-499-28
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us-09-828-000-7.rai

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GENERAL INFORMATION:
APPLICANT: Boherty, Patrick
APPLICANT: Blaschuk, Orest W.
APPLICANT: Blaschuk, Orest W.
APPLICANT: Blaschuk, Orest W.
APPLICANT: Blaschuk, Orest W.
TITLE OF INVENTION: COMPOUNDS AND METHODS FOR MODULATING ADHESION MOLECULE
TITLE OF INVENTION: COMPOUNDS AND METHODS FOR MODULATING ADHESION MOLECULE
TITLE OF INVENTION: EQUORGE 100086.403
CURRENT APPLICATION NUMBER: US/09/113,977C
CURRENT FILING DATE: 1998-07-10
NUMBER OF SEQ ID NOS: 87
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 68
LENGTH: 17
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           Gaps
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         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; OTHER INFORMATION: Description of Artificial Sequence:; OTHER INFORMATION: Synthesis
US-09-113-977C-68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Lambowitz Dr., Alan M
APPLICANT: Mohr Dr., Georg
APPLICANT: Mohr Dr., Georg
APPLICANT: Saldanha Dr., Roland
APPLICANT: Matsuura Dr., Manabu
TITLE OF INVENTION: Method for Preparing Nucleotide
TITLE OF SEQUENCES: 12
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/752,238
      7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7; Mismatches
         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET: B00 Superior Avenue CITY: Cleveland
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
NAME: GOLITICK, MATY E.
REGISTRATION NUMBER: 34,829
REFERENCE/DOCKET NUMBER: 24671/00103
                                                                                                                                                                                US-09-113-977C-68
; Sequence 68, Application US/09113977C
; Patent No. 6277824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; Sequence 3, Application US/08752238; Patent No. 5804418; GENERAL INFORMATION:
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      7; Conservative
                                                                            1 IWKHKGRDVILKKDVR 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                2 IFNYKGKNVLINKDIR 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 IFNYKGKNVLINKDIR 17
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1 IWKHKGRDVILKKDVR 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ZIP: 44114
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 7; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-08-752-238-3
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      Matches
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APPLICANT: Gour, Barbara J.
TITLE OF INVENTION: COMPONIDS AND METHODS FOR MODULATING NEURITE OUTGROWTH
FILE REFERENCE: 100086.401C3
CURRENT APPLICATION NUMBER: US/09/115,395A
CURRENT APPLICATION NUMBER: US/09/115,395A
CURRENT FILING DATE: 1998-07-14
RARLIER PILING DATE: 1998-07-12
EARLIER PILING DATE: 1997-07-11
EARLIER PILING DATE: 1997-07-11
EARLIER PILING DATE: 1996-07-12
NUMBER OF SEQ ID NOS: 77
SOFTWARE: PATCHING DATE: 1996-07-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 17;
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Synthesis
                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
CUMPUTER: IBM FO COMPALIALIE
OPPHATING SYSTEM: PC-DOS/MS-DOS
SOPTWATING SYSTEM: Rclease #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                              6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 48; DB 4;
Pred. No. 0.43;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7; Mismatches
                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US/08/939,853A
FILING DATE: 29-SEP-1997
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Maki, David J.
REGISTRATION NUMBER: 32,391
REFERENCE/DOCKET NUMBER: 100086.402
TELECOMMUNICATION INFORMATION:
TELEFAX: (206) 622-4900
TELEFAX: (206) 622-6031
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
LENGTH: 17 amino acids
TYPE: amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 23, Application US/09115395A Patent No. 6207639
                                              SEED and BERRY LLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25.4%;
43.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 43.8
Matches 7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 IWKHKGRDVILKKDVR 16
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NUMBER OF SEQUENCES: 30
                                         ADDRESSEE: SRED and
STREET: 6300 Columb
CITY: Scattle
STATE: Washington
COUNTRY: USA
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Best Lagal Similarity
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COTHER INFORMATION:
US-09-115-395-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
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TOPOLOGY: 11
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Gaps
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Patent No. 6306596
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Lambowitz, Allen M.
APPLICANT: Lambowitz, Steven
APPLICANT: Mohr, Georg
APPLICANT: Beall, Clifford J.
TITLE OF INVENTION: Methods for Cleaving Single-Stranded and
TITLE OF INVENTION: Double-Stranded DNA Substrates with Nucleotide
TITLE OF INVENTION: Integrase
FILE REPERENCE: 24671/04007
CURRENT APPLICATION NUMBER: US/09/257,770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
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                                                                                                                                                                                                                              APPLICANT: Mohr, Georg
APPLICANT: Zimmerly, Steven
APPLICANT: Guo, Huatao
TITLE OF INVENTION: Methods Cleaving DNA with Nucleotide
TITLE OF INVENTION: Integrases
NUMBER OF SEQUENCES: 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/09/031,897
                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE: Calfee, Halter & Griswold STREET: 800 Superior Avenue, Suite 1400 CITY: Cleyeland
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
NAME: Docherty, Pamela A.
REGISTRATION NUMBER: 40,591
REFERENCE/DOCKET NUMBER: 24671/00105
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                           Sequence 7, Application US/09031897 Patent No. 6027895 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEPHONE: (216)622-8416
TELEFRAX: (216)541 0816
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                              APPLICANT: Lambowitz, Alan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      : 599 amino acids
amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
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20 DDEFTHLYTLIVRPD 34
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20 DEVFTRLYRYLLRPD 34
                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ZIP: 44114
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20 DDEFTHLYTLIVRPD 34
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20 DEVFTRLYRYLLRPD 34
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Matches 8: Conserv
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US-09-257-770-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COUNTRY:
                                                                                                                            US-09-031-897-7
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GENERAL INFORMATION:

APPLICANT: Lambowitz Dr., Alan M
APPLICANT: Lambowitz Dr., Georg
APPLICANT: Mohr Dr., Georg
APPLICANT: Saldanha Dr., Roland
APPLICANT: Yang Dr., Jiam
APPLICANT: Zimmerly Dr., Steven
APPLICANT: Guo Dr., Hust Steven
APPLICANT: Guo Dr., Harbowitz Steven
APPLICANT: Meanl Dr., Clifford J.

TITLE OF INVENTION: Methods of Making an Rnp Particle
TITLE OF INVENTION: Methods of Making an Rnp Particle
TITLE OF SEQUENCES: 23
CORRESPONDER ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ., Pred. No. 45;
3; Mismatches
                                                                                                                                                                                                                                                    Score 47; DB 1; Length 599,
Pred. No. 45;
                                                                                                                                                                                                                                                                                                4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ZIP: 44114
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: BATEM: PC-DOS/NS-DOS
SOFTWARE: PATEMINE: PC-DOS/NS-DOS
SOFTWARE: PATEMINE RELEASE #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/085,603B
FILING DATE:
FLING DATE:
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE: CALFEE, HALTER & GRISWOLD LLP
STREET: 800 Superior Avenue
CITY: Cleveland
                                                                                                                                                                                                                                                                                                3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Docherty, Pamela A.
REGISTARATION NUMBER: 40,591
REFERENCE/DOCKET NUMBER: 24671/04000
TELECOMMUNICATION INFORMATION:
TELEFAN: (216) 622-8416
TELEFAN: (216) 241-0816
INFORMATION FOR SEQ ID NO: 3:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 3, Application US/09085603B Patent No. 6001608
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                  24.9%;
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53.3%;
                   (216) 622-8458
                                 TELEFAX: (216) 241-0816
INFORMATION FOR SEQ ID NO: 3
SEQUENCE CHARACTERISTICS:
LENGTH: 599 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 599 amino acids TYPE: amino acid
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Best Local Similarity 53.3<sup>3</sup>
...aq 8; Conservative
                                                                                                                                                                                                                                                    Query Match 24.9
Best Local Similarity 53.3
Matches 8; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; MOLECULE TYPE: protein US-09-085-603B-3
                                                                                                                                                                  : MOLECULE TYPE: protein US-08-752-238-3
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20 DEVFTRLYRYLLRPD 34
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CITY: Clevel
STATE: Ohio
COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY:
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US-09-085-603B-3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 3, Application US/08906865
Fatent No. 6040168
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Greengard, Paul
APPLICANT: RAO, Hung-Teh
TITLE OF INVENTION: DNA ENCODING THE HUMAN SYNAPSIN III GENE
TITLE OF INVENTION: AND USES THEREOF
NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS: 4
CORRESPONDENCE ADDRESS: A TOWNER OF STATES OF SECUENCES OF SEQUENCES OF SECUENCES OF SEQUENCES OF SECUENCES OF S
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                                                                                                                                                                                                                                                                                                                                                                                       Score 47; DB 4; Length 599;
Pred, No. 45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE: David A. Jackson, Esq.
STREET: 411 Huckensuck Ave, Continental Plaza, 4th
STREET: Floor
STREET: Floor
STATE: New Jersey
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
COMPUTER READABLE FORM:
MEDIJUM TYPE: Floppy disk
COMPUTER: IMP PC compatible
COMPUTER: IMP SYSTEM: PC-DOS/MS-DOS
SOFTATION DATA:
APPLICATION NUMBER: US/08/906,865
FILLNG DATE:
CLASSIPICATION S36
ATTORNEY/AGENT INFORMATION:
NAME: Jackson Esq., David A.
REGISTRATION NUMBER: 600-1-202
RELERANOR: 201-487-5800
TELEFANOR: 201-43-164
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: SME AMINO acids
TYPE: amino acid
STRAUPEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                               3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5 YKGKNVLINKDIRCKDDEFTHLYTLIVRPD 34
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CURRENT FILING DATE: 1999-02-25
                                                                                                                                                                                                                                                                                                                                                                                   Ouery Match
Bent Local Similarity 53.3%;
Matches 8; Conservative
                                                                                                                                                                                         TYPE: PRT CRGANISM: Lactococcus lactis US-09-257-770-6
                           NUMBER OF SEQ ID NOS: 12
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 6
LENGTH: 599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 36.79
Matches 11; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY: linear
MOLECULE TYPE: protein
DESCRIPTION: /desc
HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20 DDEFTHLYTLIVRPD 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1: || || ::|||
20 DEVFTRLYRYLLRPD 34
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US-08-906-865-3
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Pred. No. 40;
2; Mismatches 5; Indels
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APPLICANT: Famodu, Layo O.
APPLICANT: Famodu, Layo O.
APPLICANT: Graceo, Buddy
TITLE APPLICANT: Bafalski, Antoni
TITLE OF INVENTION: Plant Aminoacyl-tRNA Synthetase
FILE REFERENCE: BB-1191
CURRENT APPLICATION NUMBER: US/09/352,990
CURRENT FILING DATE: 1999-07-14
EARLIER APPLICATION NUMBER: 60/092,866
EARLIER FILING DATE: July 15, 1998
NUMBER OF SEQ ID NOS: 29
SOFTWARR: Microsoft Office 97
SEQ ID NO 16
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130 FRGKKVLGDYDIKVEQAEFSEL-NLVAHAD 158
                                                                                 RESULT 15
US-09-352-990-16
; Sequence 16, Application US/09352990
; Patent No. 6255090
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56.2%;
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Best Local Similarity 50.4
Best Local 9; Conservative
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